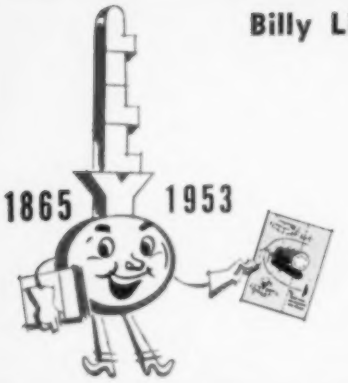
MAY, 1953

Industrial FINISHING

Published Monthly in the Interest of Product Cleaning and Painting by Practical Publications, Inc., 1142 N. Meridian Street, Indianapolis 4, Ind.

Billy Lilly says:



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The Gilbert Spruance Company is working with many of the foremost wood and metal furniture manufacturers to create and supply them with the finest

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When necessary, we originate finishes to precise specifications for definite effects. Throughout the trade Spruance finishes are known for their uniformity, durability and beauty.

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PAINT SPRAY FINISHING SYSTEMS

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Finish retains natural feeling of *Ficks Reed* MALAY MODERN

The Better the Finish
The Better the Buy

The advantage of a custom created finish is well illustrated by the Ficks Reed Malay Modern group. Working to retain Malay Modern's atmosphere of comfortable informality, our finish specialists developed a natural finish to blend with the Rattan and Oak veneer construction. They made it tough and durable to withstand the sort of zestful living this furniture invites. The result is a practical, profitable, saleable finish.

GRAND RAPIDS VARNISH CORPORATION
GRAND RAPIDS, MICHIGAN

Makers of the Famous Guardsman Finish and Guardsman Cleaning Polish

MAY, 1953
Vol. XXIX, No. 7

CCA

A monthly magazine for finishing room and paint shop foremen, production superintendents, chemists, purchasing agents and company executives of industrial plants where product surface cleaning and finishing are major operations in the manufacture of parts and products.

Industrial FINISHING

W. H. ROHR, Editor P. C. BARDIN, Associate Editor

Contents

Random Comment on the Industrial Scene 4
Stirring and Straining 24
Cleaning and Painting Heavy Steel Products 37
"We Are in Trouble; Go, Fix the Paint" 44
Printing on Finished Metal by Screen Process 48
Finishing Owens' Flagships 56
How to Cut Patching Costs 64
Flock 70
"Letters from Readers" 84
Questions and Answers 94
Materials; Supplies; Equipment 104
Booklets; Circulars; Catalogs 116
Editorial 122
Classified Advertising Department 130
Advertisers Index 132

Electroplaters' Society Meets June 15 to 19 32
Metalwash Machinery Corp. Appoints Wm. F. Ross 32
Five Keys to Control of Production 42
Allen is Sales Mgr. for the Pittsburgh's Forbes Divn. 43
FPRS Convention in Memphis, June 15 to 18 46
Norwegian Paint Executive Visits Glidden Co. 50
J. E. Rhoads Joins Enthone 50
Keep Your Electrical Installations Safe 52
Enthone, Inc., Extends Service 53
Jones-Dabney to Build New Laboratory 66
M. A. Glaser Gives Talk at Harvard Graduate School 81
How to Solve Problems 100
L. F. Luckenbill Joins Union Tool Corp. 101
Hercules Establishes New Laboratory 101
Phosphate Coating Before Painting 120
C. F. Mayer, Industrial Oven Authority, Receives Award 121
Technical Director's Meeting S. R. & Co., Paint Factories 124
Finishing by Vacuum Metallurgy 124
Ames Speaks at International A.E.S. Meeting 124
Ransburg No. 2 Process Shown By Color-Sound Film 125
Safety Service Guide 126
Circo Moves to New Plant 126
Lindsay Appointed by Sullivan Varnish 129
Fitzgerald, Sales Mgr. of Burdett Mfg. Co. 128
K. B. Kemp in New York for Ransburg 129
Detrex New Process Makes Two Chemicals 129

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Vice-President ..... E. A. Dosch
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Eastern Representative:
C. A. LARSON
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29 TWENTY-NINTH YEAR OF PUBLICATION

Reinforced Plastics have been used for the last few years to make such minor items as tote boxes, lunch boxes, small tool kits, etc. But the industry is growing up. Now such products as refrigerator linings, washing machine tubs and aircraft parts are produced in reinforced plastics. Several large automobile makers will make several hundred experimental auto bodies out of this tough material.

Fiber glass is used in 98% of all reinforced plastics. The remaining 2% is reinforced with paper, rayon, nylon and other synthetic fibers.

* * *

Floor Tile that is said to require no waxing, and to improve in appearance through use has been developed. Foot traffic on these plastic tiles provide a buffing or polishing action.

Tests have proved the tile to be moisture resistant, fireproof, and it is not affected by alkali.

* * *

Millions in Plastics. Sales of plastic in Canada and the U. S. will triple in volume by 1960, with the greatest advance to be noted in the field of plastic materials for structural use, according to Dr. Frank K. Schoenfeld, vice president-technical, of the B. F. Goodrich Chemical Co., Cleveland, O.

Plastics, the most versatile structural materials known, are beginning to invade the structural material field, competing with lumber, glass, light metals, ceramics, iron and steel in many applications.

Today, plastics can be combined with or can replace textiles, rubber and leather to increase the personal living comfort of the average man. They are broadly used in industry as adhesives for plywood, as the base

Small aerosol containers, from which you can spray the contents (including finishing materials, liquid polishing wax, etc.), are now used in factories, stores and in homes. Here the lady is spraying polishing wax.

Dolan's

HI-SOLIDS LACQUER No. 8800

The unprecedented demands for our Hi-Solids Lacquer have convinced us that Lacquer users want High-Solids.

Dolans No. 8800 Hi-Solids Lacquer is formulated at spraying viscosity: requires no thinning. It flows out perfectly to produce a full bodied, tough, durable film, possessing excellent cold check resistance.

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DON'T BE A SPRAY BOOTH SPENDTHRIFT

Records show that improperly maintained booths run up thousands of dollars in unnecessary costs, caused by production shut-downs, extra time for maintenance, spoiled production, unreclaimable paint, and preventable booth repairs.

CUT COSTS with DuBOIS SPRAY BOOTH MAINTENANCE

Here's what you get when you do business with DuBOIS:

Thorough analysis of your operations by trained and experienced personnel. Installation of prescribed specialized compounds:

- **KLARIFIANTS** . . . Water-wash compounds to effectively control overspray
- **FILMITES** . . . coatings for dry areas of spray booths
- **STRYPP** . . . for periodic purging of old paint deposits in the hydraulic system.

FREE . . . spray booth maintenance check chart

. . . yours for the asking, a daily, weekly and monthly program for proper cleaning and maintenance of paint spray booths.

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Serving Industry Since 1920

for the newest types of paints, as the raw materials for synthetic textile fiber and textile treating agents, as paper and leather treating agents, as agricultural aids and as medicinals.

* * *

Conveyor Belt for uphill and downhill jobs is announced. It is called Ribflex Griptop, and is said to be capable of carrying packages, cartons, etc., up or down grades as steep as 55°.

The belt has a special ridged and cross-cut rubber surface which provides the extra gripping power. The flexible ridges are parallel and run across the width of the belt.

* * *

Durable, Flexible Paint Film. A silicone resin base enamel called Nubelon-S has been developed. It is said that products finished with this material can be bent, twisted or hammered—even splattered with stain—without marring or damage to the finish.

The manufacturer says that it may replace porcelain and galvanizing on such items as kitchen appliances, metal furniture, prefabricated farm buildings, silos and hospital equipment. It is more expensive than ordinary enamels, but cheaper than porcelain.

* * *

Non-Static Rubber. Ordinarily rubber is an insulator for electricity. Now a rubber has been developed, by compounding with certain types of carbon blacks, that has an electrical resistance of less than 100-ohms.

Conductive rubber can also be produced with a resistance of less than 100,000-ohms.

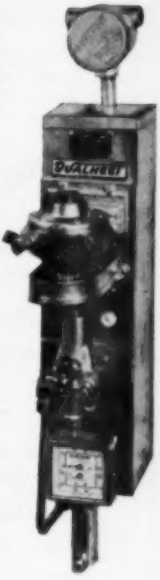
Both types of rubber will find many uses where safety and comfort against static electricity are involved. Only

DUALHEET
Paint Heaters For Industry

MODERNIZE Your Finishing Technique With DUALHEET HOT SPRAY...

And Get These Dualheet Features!

- Used singly, wall mounted or portable—or, in "Tandem" style ganged together in one outer jacket.
- Two styles: WITHOUT Recirculating Pump and Motor where constant flow of paint is used; WITH Recirculating Pump and Motor Attachment where production is intermittent.
- Exclusive DUALHEET feature places controlling thermostat direct in paint to minimize temperature variation.
- Exclusive design and construction provide the SMALLEST, yet the most POWERFUL Paint Heater approved by Underwriters Laboratories.



Model 250-R Dualheet with Recirculating System

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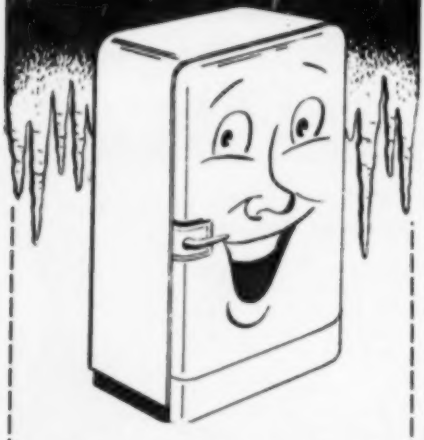
THE ONE-COAT WHITE...



THAT LAUGHS AT THE COLD

Refrigerators may be freezing—but they'll still need only one coat (of white enamel) with Sea-Lac. And the finish is there to stay, despite low temperatures, humidity, or the other "paint-killers" . . . fruit acids, greases, shortenings and soaps. Bakes to full hardness in 35 to 45 minutes at 300° F. Can be used with primer if desired.

SEA-LAC

DURALAC CHEMICAL CORP.

84 LISTER AVE., NEWARK 5, N. J.

the insulation quality of the rubber is changed; all other properties remain the same.

For complete details write Natural Rubber Bureau, 1631 K St., N. W. Washington, D. C.

* * *

Heat Resistant Plastic called CP 701 is announced. It is a silicone base compound that can withstand heat up to as much as 392° F. for long periods of time. It is possible to use this material for electric tube bases and sockets, relay mountings and switch components. Industry will find other uses for a compound with these properties.

* * *

New Flashlight Bulb. General Electric's Lamp Division announces a flashlight bulb which, at the flip of a switch, throws either a flood light or spot light. It has two filaments just like automobile headlights; each one may be turned on independently.

You will recognize flashlights using this bulb by the three position switch, one for "off," one for "spot," and one for "flood."

* * *

System Engineering "is the latest in the long train of human efforts to substitute animal or elemental power for human muscle, a trend which began with the invention of the wheel," to quote Henry F. Dever, president, Brown Instrument Division of Minneapolis-Honeywell Regulator Co.

Events are pressing industry toward the day when 15% of its capital outlay for machinery and equipment will be spent for instruments of measurement and control.

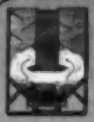
The automatic plant is approaching, but plants will always need men. Pessimists who predict an age of slavery to the machine, and optimists

(Continued on page 125)

PLANT ENGINEERS PREFER

Schmieg CENTRI MERGE INDUSTRIAL EQUIPMENT

Schmieg DUST and FUME CONTROL EQUIPMENT



Completely automatic Centri-Merge units are designed and engineered to your specific requirements, to maintain the cleanest dust- and fume-free working conditions. Compact, self-contained equipment occupies a minimum of valuable floor space, saves many maintenance dollars.

Schmieg SPRAY BOOTHS

Designed, built and installed to synchronize with your production line. No fire hazard with a Centri-Merge; overspray carried away in a whirling tornado of water. Safe, clean, efficient, economical; adapted to any type of conveyor equipment, overhead or floor.

Schmieg MECHANICAL WASHERS

Centri-Merge is first step and first choice of plant engineers for high production cleaning, long trouble-free service at low operating cost. Convenient manual or automatic types for any finishing application.

Schmieg INDUSTRIAL OVENS

Safeguard your product quality with Schmieg drying and baking-ovens. Every operating essential carefully designed and engineered to give you the very best finishing job. Any size, shape or type of oven, conveyor or box, for any installation arrangement.

Consult Schmieg Engineers Today

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Personnel, equipment and know-how are three of the most important things in the development of fine finishes. At TOUSEY we have all three. Your paint problem is thoroughly studied by competent technicians whose long experience aids them in suggesting the proper formula for a finish best suited to your specific requirements. The pilot formula is tested against your specifications in a completely equipped physical testing laboratory, before being produced for shipment.

This painstaking attention to detail is a most important part in Tousey's development of fine finishes.

TOUSEY PRODUCTS

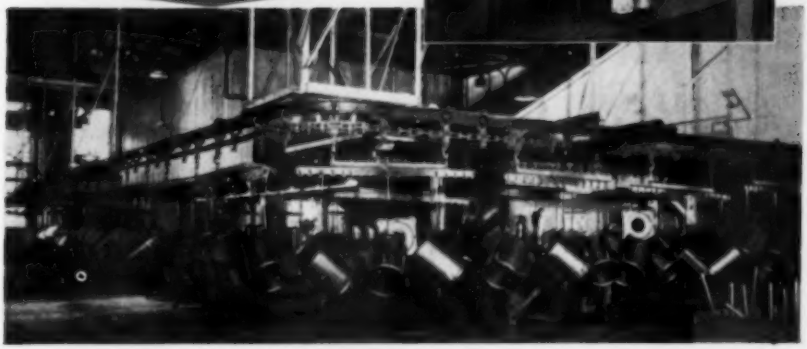
DURACOTE for DURABILITY

TOUSEY VARNISH COMPANY

520 W. 25th Street • Chicago 16, Ill.

Let Performance Convince You!

Let's look at the BURDETT SYSTEM in the plant of STEWART-WARNER CORP. Chicago



Product stays in oven 11 to 12 minutes. Temperatures:—Prime, 340° F., — Finish Coats, 320° F., and Dry-off, 360° F.

Perhaps we, like most manufacturers, have given too much attention to telling you about new installations, new improvements and the like, ignoring a very important point to you as a user, that of "How efficiently will a Burdett System serve five years from now?" Well, here is a Burdett System which includes spray booths, washers, and "Radiant Heat" Ovens that will prove that point for you. Installed five years ago, it still performs at top efficiency — maintenance has been negligible — and most important, it is as far out in front of competition today as it was the day it left the drawing board. In the words of Mr. John Tymm, Supervisor of Painting and Enameling Operations at the Alemite Division of Stewart-Warner—"The fact that the heat remains constant from top to bottom of this Burdett "Radiant Heat" Oven is one that insures us of an even, smooth bake at all times." Economy of operation is something else you will want to think about, because there is none as economical as Burdett — combustion is complete — control is precise. There are no obligations for Burdett recommendations—hear the whole story and judge for yourself.

BURDETT
MANUFACTURING COMPANY
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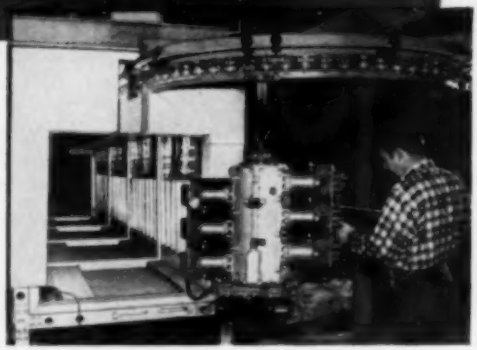
Also Manufacturers of "Radiant Heat" Systems, Ovens, Heaters, Air Make-Up Units, Spray Booths and Washers.

"Superior Finishes, Less Drying Time with JENSEN PAN·L·HEAT!"

AIRCOOLED MOTORS, INC. TELLS HOW IT MEETS AIRCRAFT FINISHING STANDARDS



"SUPREME QUALITY is the primary consideration in every operation connected with the manufacture of aircraft engines," says this leading manufacturer. *"Jensen Pan-L-Heat has given it to us. Our engines are now coming out with superior quality finishes . . . in addition, drying time has been substantially reduced."*

Solving problems of all types —like meeting unusually high standards — is a Jensen specialty. Your particular heating problem will get prompt attention from Jensen engineers. Representatives are located in all principal cities.

This 28-ft., 100-KW Pan-L-Heat oven is used by Aircooled Motors, Inc. to bake grey enamel on air-cooled aircraft engines. Conveyor was also supplied by Jensen—operates at a speed of one foot per minute. Engines, weighing over 350 lbs. each, are mounted on four-foot centers.

JENSEN PAN·L·HEAT:

- Increases pay load realization by improving oven efficiency.
- Uses electric heat more effectively at low cost.
- Improves quality and uniformity of production.
- Gives superior results with shorter heating cycles—at lower energy consumption.

• Get *All* the Facts—Write for Jensen Pan-L-Heat Brochure (on your letterhead, please).

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Outstanding products of American industry are finished with...

Rinshed-Mason Enamel

World famous Ironrite Automatic Ironers are finished with R-M non-yellowing white synthetic baking enamel and primer. Workability is excellent, with positive assurance of a perfect tone match of parts painted separately before final assembly.

One of America's leading manufacturers of fine enamels, lacquers and undercoats for appliances, automobiles, trucks, farm equipment and numerous other products of industry. We invite your inquiry.

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1244 NORTH LEMON STREET, ANAHEIM, CALIFORNIA
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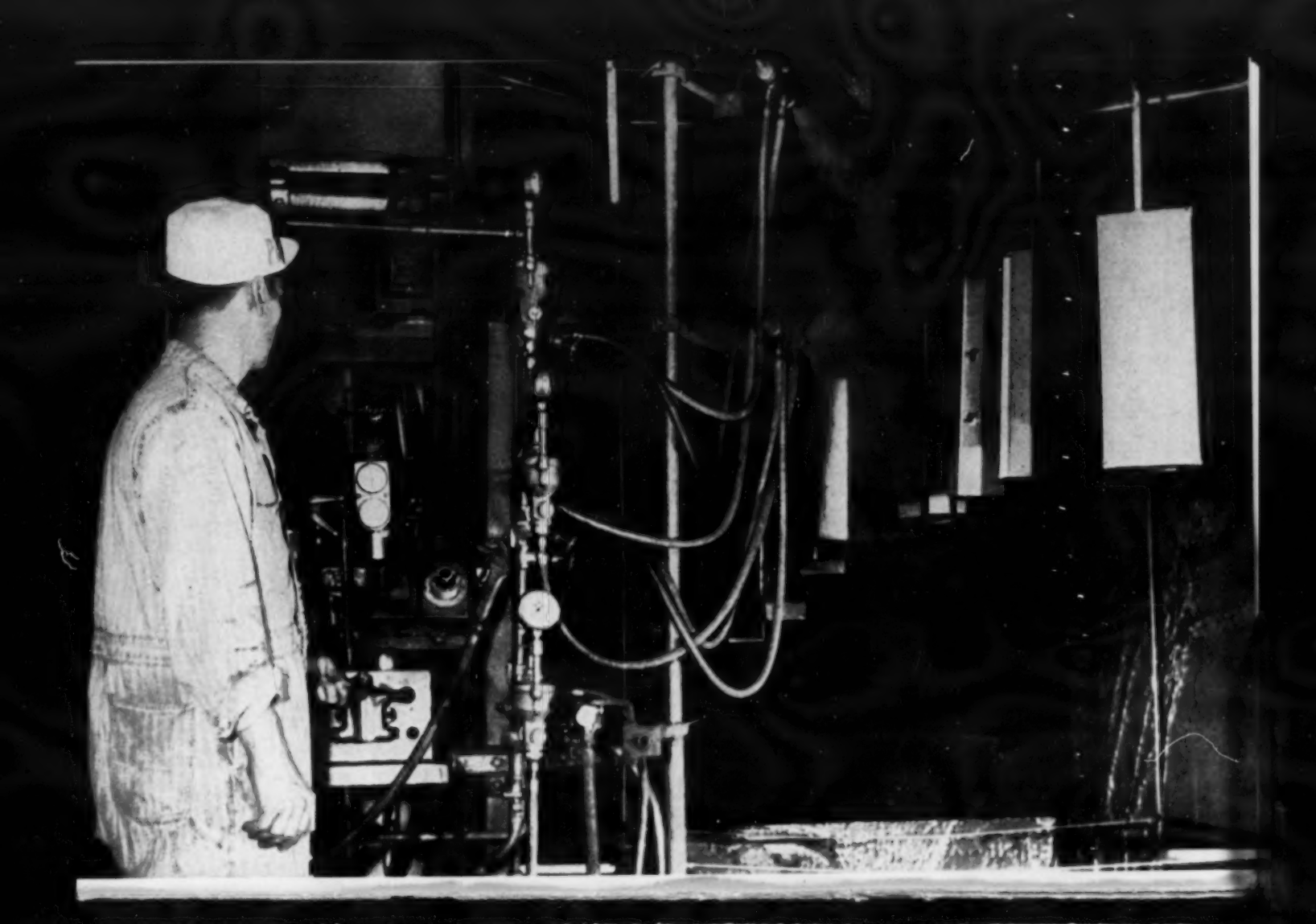

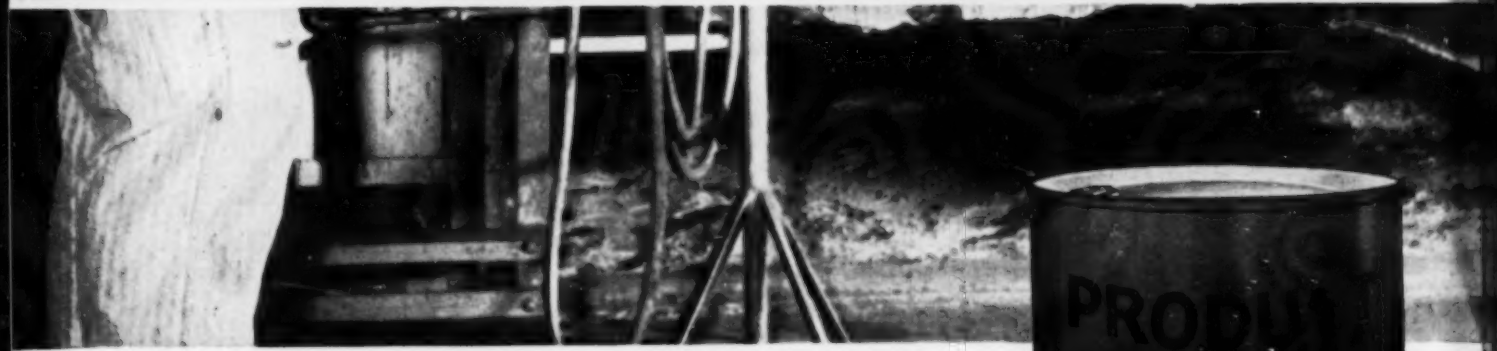

"HIGH CHARGE" CUTS FINISHING COSTS

The 100,000-volt field of this electrostatic painting system at Waterloo Valve Spring Compressor Co., is used to attract ionized paint particles directly to the product being finished, thus eliminating overspray and saving paint. Glidden's work in helping to develop this installation typifies our policy of cooperation in paint economy programs with our customers. We help them use less paint.

Glidden—leader in the development of quality product finishes—offers you a complete range of materials for electrostatic application . . . and competent technical assistance on *any* finishing problem.

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Automatic Electric Spray-Bake Coating Machine

Pays For Itself In Regular Production Within 3 To 6 Months

Has Built-in Drying Chamber and Electric Strip-heated Oven

- Equipment includes conveyor, water-wash or dry-spray booth, drying compartments, electric strip-heated oven, controls, etc.
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- Pieces on work holders are automatically sprayed . . . travel through a drying chamber for solvent evaporation, and then into electric strip-heated bake oven.
- Excellent for shell noses, cartridges, weapon parts, clocks, pens, pencils, hardware, etc.
- Produces a high quality finish and exceptional savings on sizes and shapes that are difficult to handle.

Let us make a test run of your own work samples—for time study and cost analysis—no obligation.

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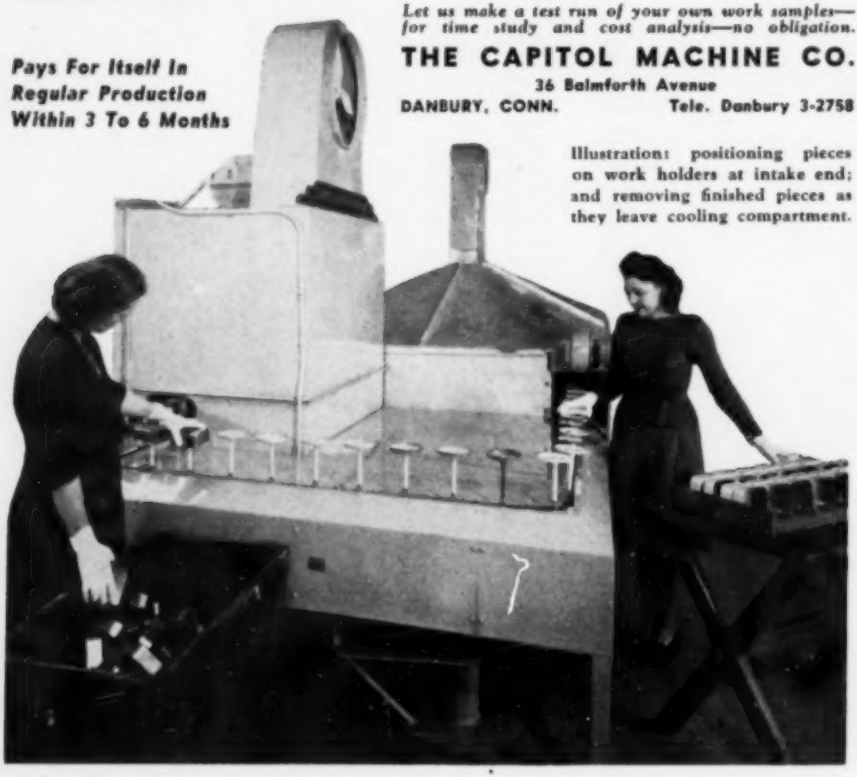
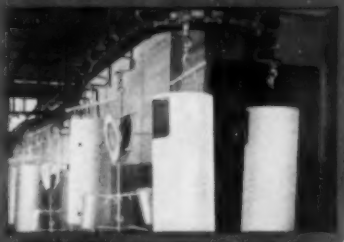


Illustration: positioning pieces on work holders at intake end; and removing finished pieces as they leave cooling compartment.

Prime and Finish Coat DESPATCH Conveyorized Ovens mounted on plant roof to conserve space.



DESPATCH monorail tunnel type Lead Finish Bake Oven.

DESPATCH Waterwash Spray Booth on a Charger Cabinet line.

Complete Finishing Systems designed, fabricated and installed by DESPATCH are engineered to meet your specific finishing problems. Your every requirement is given full consideration by competent DESPATCH engineers with the ultimate result that you have a system that will produce top quality finishes on your products at the lowest possible operating and maintenance costs.

We can tell you of hundreds of plants, some in your locality, that have proved this. From start to finish, dollar for dollar, DESPATCH engineered equipment performs better!

For more information—write to Dept. E

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YOU CAN BANK ON IT!

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Uniformity of heat distribution and rapidity of solvent removal give smooth, even paint film.

THOROUGH UNIFORM BAKE
Near Infra-red energy penetrates paint film with constant uniform temperature.

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No by-product of combustion—no condensation of solvent volatiles to mar finish.

SAFETY CONTROLLED
Instant heat shut-off with conveyor stoppage. No over-baking by shut-off lag.

STABLE PERFORMANCE
Unaffected by day-to-day changes in weather conditions.

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● Throughout industry, new high standards of finish quality and production efficiency are being set by utilization of modern Fostoria oven equipment. A Fostoria representative will gladly analyze your production needs and submit definite recommendations with a laboratory proved forecast of results you can bank on with a Fostoria oven.

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WRITE for this brochure of technical facts on Infra-red and case histories of many Fostoria oven installations. Tell us about your particular problem and we will include data directly applicable to your operations.

give the FINEST finish bake SAVINGS in time, space and costs

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LOWEST OPERATING COST
Puts heat into the product—not into oven walls. Uses less fuel. Gold plated interior reduces heat loss to 2%. In most instances the efficiency of Fostoria electrical operation actually costs less than any other fuel.

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Shorter Cycles — most production for oven size. May be ceiling mounted.

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Fastest means of heat transfer. No warm-up required—no shut off lag. Heat levels instantly changeable.

LOWEST MAINTENANCE COST
Clean operation — no combustion by-products. Lowest source replacement cost.

COMFORTABLE WORKING CONDITIONS
No room ventilation problem.

COMPETITIVE INITIAL COST
Comparable to any quality-built oven.

MOST EFFICIENT OF ALL INDUSTRIAL OVENS

—Puts HEAT INTO THE PRODUCT—NOT INTO THE OVEN WALLS

INFRA-RED fostoria OVENS

Send for Complete Facts

THE FOSTORIA PRESSED STEEL CORP.
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Please send information on Infra-red ovens for

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Here are other EXCLUSIVE advantages:

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When decorating offices, stores, hotels, apartments, etc., why be annoyed with the lasting odor of newly painted walls. With Nikolas "Odorless" Paints the only indication of fresh paint will be the "WET PAINT" sign.

Not only are these paints odorless, but careful formulation has resulted in a finish with remarkable durability, eliminating the yearly necessity of doing it over.

Available in almost every conceivable color, from white to black, pastels, and deep-tones.

For Full Information, write—

G. J. NIKOLAS & CO., Inc.

Manufacturers of Finest Lacquers Since 1895

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SERVING INDUSTRY

an idea was hatched...

That was twenty years ago. And, the idea was Pearl Essence . . . a natural pearly pigment. Your immediate recognition of the excellent possibilities for Mearlmaid Pearl Essence . . . your encouragement . . . helped our idea to success.

Since that day twenty years ago, when we first presented our idea, we've hatched many others. Notable among these is Nacromer, our low-cost substitute for natural Pearl Essence. Again, your approval and encouragement, helped us to success.

For this confidence you have expressed in us, we are grateful. That's why, on our twentieth anniversary, we pause to say, *"Thanks."*

the MEARL corporation

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FOR 20 YEARS

Stirring and Straining

Preparation of the paint or finishing material —temperature conditioning, mixing, stirring, straining and control of viscosity—is just as important as proper preparation of surfaces to receive the paint, and the use of efficient methods and equipment, with which to apply it.

BY GEORGE A. CONRAD

WHEN A NEW apprentice enters the finishing room, one of the first things to impress upon him is the importance of properly stirring and straining paints just before they are used. Until he has mastered the art of properly preparing materials for use, the beginner is really not eligible to be instructed in the principles and details of paint application.

How thoroughly and carefully the paint or enamel is stirred and strained before it is used (if it is stirred or strained at all) can make or ruin any finish, yet these essential jobs seem to be more noted for their neglect than for their observance. Even where some gesture is made toward preparing paint for use, the way it is done may be so sloppy and inefficient that little if anything worthwhile is attained.

It is surprising how few plant managers, or even finishing supervisors, seem to know the simple economics of getting full value from every gallon of material the company buys. Improperly prepared paints invite trouble—and usually result in an inferior finish. I have seen hundreds of "empty" 5-gallon pails lying in the disposal area—and every one has from one to three inches of paint residue on the bottom. And paint costs money too.

Wasteful Practices That Cost Your Company Money

I have seen sprayers open cans of enamel which had lain undisturbed for two years. They probed the contents feebly with a small round dowel, poured some into a spray cup and began to spray—and this directly under the eyes of their foreman. I have also seen finishers busy sanding rejects, and sprayers stopping to pick specks off the work —all of which could have been avoided by proper training.

Much of the labor involved in stirring or agitating paints could be minimized by wise buying and

storage practices. If containers of paint must be stored for long periods of time and if the settling of pigments becomes a problem, this matter should be taken up with the paint supplier. Perhaps he can adjust the formulation so that settling will be retarded or, so the settled solids will remain soft.

Compact motor-driven paint-can shaker, with a filled 5-gallon can clamped in position. Machines are available to take different size cans. Quoting company's claim: "All paint restored to its original consistency without opening the can. Two minutes per gallon".

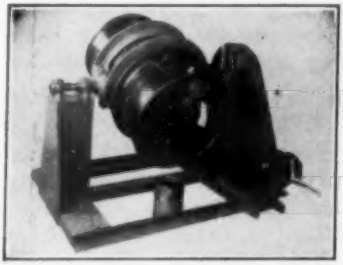
Heat accelerates settling by reducing the viscosity of the vehicle; therefore it is desirable that the storage area can be on the cool side. Filled containers that must stand for several weeks or months should be turned over regularly, and the oldest stock should be used first.

Shake Container by Power or Use a Propeller-Type Mixer

Where the quantity of material used warrants it, there is no better investment than one of the mechanical paint rejuvenators or "shakers". By using one of these labor savers you can quickly restore, to uniform viscosity, the contents of a container of paint material; they are available in sizes to handle anything from a small can to a 55-gallon drum.

If no machine or power device is at hand for shaking, vibrating or rolling the container of paint or enamel, as received from the supplier, then a manual or portable, power-driven propeller-type mixer or stirrer can be used—if it is available. Some large drums have such a "mixer" mounted inside (or one can be put inside easily) so it can be rotated by hand or by power. Otherwise, the lid or head of the container will have to be removed to admit the propeller and its drive shaft.

Motor-driven, long-shaft, propeller mixers are designed to clamp firmly to the edge of an open container. If the mixer is driven by an electric motor, its motor should be an approved spark-proof explosion proof motor as a matter of safety. Some mixer motors are driven by compressed air. [*Cont'd on page 26*]



Drum tumbler or mixer, motor driven, takes a filled 55-gallon drum of paint (as received from the supplier) and whirls it end over end at about 30-r.p.m. to agitate and mix the contents. A detachable crank on end of the motor shaft enables operator to turn the drum to any desired position to sample or test its contents, or to pour some of the contents into another container.

Here the broken away section lets you see inside of paint container fitted with an adjustable propeller type stirrer or mixer and a pump (both air driven) for pumping paint through pipe lines or hose to spray operator. Units are furnished portable or non-portable, to take 5 or 10-gallon shipping container, or in models large enough to fit over a 55-gallon drum of paint.

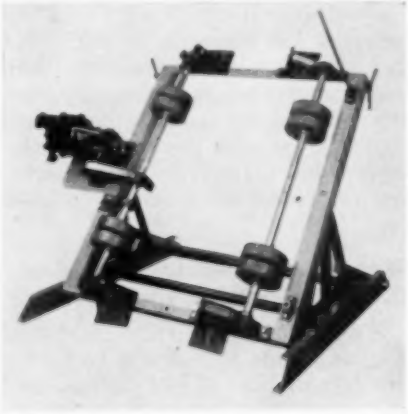
Precautions to Observe When Using a Propeller Mixer

Do not stir a completely filled can of paint. Pour about one-fourth of its contents into another container. This will give you a margin of safety against loss of paint by splashes or swirls while the paint is being stirred. The propeller should be immersed deeply into the paint before it is started. If any speed adjustment is possible, then use the slow speed first.

Let the operator gently probe the bottom of the container with the propeller blade to break up any settled pigment. Once this has been done, the speed of the mixer may be increased until the top liquid is being drawn down into the vortex formed by the swirling material. Finally, the drawn off liquid is poured back into the container. In no case, should the stirring be sufficiently violent to whip excessive air into the paint. Air bubbles can be troublesome.

Using Paint Paddle and "Boxing" or Pouring Technique

Lacking any mechanical aids, it is still possible to stir or mix paint with a hand paddle. One can supplement hand stirring by "boxing". By this method, about ⅔ of the contents of a paint can is poured into a clean container. The remaining ⅓ will have the most of the pigment which has settled on the bottom. To break up this settled pigment, use a broad strong paddle



A tilting cradle in which a 55-gallon drum of material can be positioned in tilted or horizontal position and rolled as it rides against wide-face rubber-tire rollers, one set of which is driven by a small motor.

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made of wood or plastic. It should be squared along its bottom edge so you can scrape the bottom and probe into the corners of the container. It is not too difficult to break up hard caked paint and gradually convert it into a smooth paste. Final mixing is accomplished by repeatedly pouring the contents of both cans back and forth, this "boxing" being interspersed with additional paddle stirring.

Strain Finishing Materials; Safest Practice

When in doubt as to whether or not to strain any finishing material, there is only one safe rule to follow: Strain it. Even clear materials (non-pigmented) can contain invisible blobs of gelled resin—and, in rare instances, a few specks of dust or a trace of lint; stains can carry tiny crystals of undissolved dye or precipitates. The only possible exceptions are sealers, surfacers or undercoats which, after they have been applied and are dry, will be sanded smooth anyway. The time and cost of straining paint is more than made up by fewer rejects and by tools and equipment that do not become clogged.

An air-powered paint pump, with a built-in propeller type agitator or mixer, operates inside this portable container. It will work directly from 5 or 10-gallon paint containers. Units are available to use on 55-gallon shipping drums, with or without the dolly or portable feature.

As in all other work, there is a right and a wrong way to strain paint. A little common sense will determine whether it is to be a simple chore or a tedious frustrating type of labor. Proper preparation of the facilities needed will make it easy, and there will be less temptation to dispense with the straining entirely.

Remove Paint Skins First; Thin to Right Viscosity

Here are some fundamental rules that will simplify the straining of finishing materials.

1) All sizable paint skins should be removed before straining.

2) Reduce the material to approximately its correct application viscosity before straining. This will help to speed up the straining and it will eliminate any possibility of contamination during the reduction or thinning of the material.

3) When a viscous material contains a large amount of lumps and skins, you may save time and get better results by straining it twice. The first time, let it go

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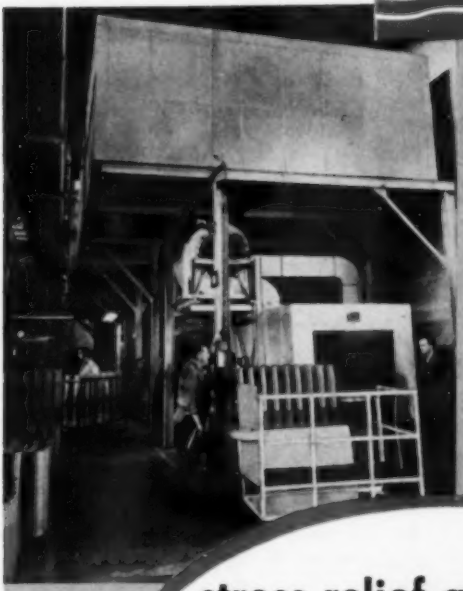

View showing back end of ROSS varnish bake oven at NORRIS-THERMADOR CORP.

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Designed to solve a double-barreled treating and finishing problem in the mass production of cartridge cases, this gas-fired ROSS System is operating 24 hours a day for NORRIS-THERMADOR CORP. at Los Angeles, Cal. Where the need is for speed, accuracy and dependability in operation, there you'll find ROSS Systems on the job.

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through a comparatively coarse mesh to remove only the large particles. The second time it can be put through a finer mesh strainer without clogging. In some few instances even three times through a strainer may be advisable.

The small reinforced paper and cloth cone-shaped strainers are familiar to most finishers. These strainers can be obtained with mesh of different size. Where larger strainers are needed, other devices have been developed. Some foremen use cones made of wire cloth. Others cut the bottom out of a pail and replace it with a circular section of wire cloth. Still others use pieces of thin silk, which they tie or clamp across top of a receptacle.

An assortment of metal kitchen strainers can be obtained in any hardware store. The mesh is usually right for a preliminary straining. Then, to remove the fine particles, it is only necessary to form a section of the proper cloth around the inside, securing it with clips or rubber bands. This arrangement gives a large straining area for fast but efficient straining.

When selecting cloth for lining a metal strainer, it is not necessary to use silk. Any non-linty material that is woven evenly from hard-twisted threads will do. Organdy is an excellent example of this type of cloth. If in doubt, hold the cloth up to the light and look through it. If any trace of fuzziness or lint can be detected, no matter how thin it may seem, discard it. It will become clogged quickly and will hinder the free flow of paint through the strainer.

Straining Can be Rapid but Strainers Must be Clean

The speed of straining is dependent upon three factors:

1) Amount of straining area exposed to the liquid. Naturally, a strainer that has 100% of its area suitable for straining will let the paint flow through more rapidly than one that has only a small mesh area.

Small paint strainers that you can buy. One is made of heavy paper stock with the inserts in coarse, medium, fine or extra fine mesh. It is 6-in. in diameter.

The other one is an all metal strainer, mounted in the open ring of sturdy bent-wire stand. Different size mesh is available.

2) Pressure of liquid on the straining area; if the strainer is kept full of paint, the weight of the liquid paint above will press the paint through faster.

3) Preventing the screen or cloth from clogging (keep the liquid moving in a gentle swirl) will help to keep the pigment from settling at the lowest point of the strainer; sediment will tend to be deposited along the sides, while the liquid drains out through the bottom. When non-strainable material accumulates and begins to impede the passage of strainable paint, the accumulation of sediment at lowest

Looking *for sheep's wool under the sea*

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MEK is one of the Shell "quality group" of solvents, which includes—among others—MIBK, MIBC, and IPA. Your Shell Chemical representative will be happy to discuss the advantages to be gained from using MEK in your formulations.

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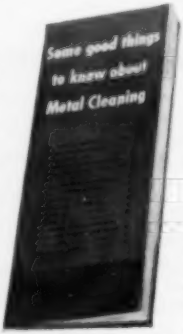

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point of the strainer can be gently dislodged with a dull spatula, taking care to avoid forcing any undesirable particles through the mesh.

A paint strainer, to be really effective, should be kept perfectly clean. After it is used, all left-over paint and skins should be removed. Then, before the thin film of paint that clings to the mesh has time to harden, the strainer should be cleaned in a thinner or solvent. This preliminary cleaning should be followed by a second cleaning and rinsing in a clean solvent. While the first cleaning solvent need not be perfectly clean, the final rinse should be in strictly clean solvent. Never leave a paint strainer to soak in thinner or solvent.

Electroplaters' Society Convenes June 15 to 19

The 40th Annual Convention of the American Electroplaters' Society will be held June 15 through 18th in Philadelphia. The Philadelphia branch has prepared a technical and social program.

Technical sessions will cover a wide variety of subjects and are highlighted by a symposium on chromium plating. Papers to be presented have been carefully selected to cover all phases of plating including cost estimating, the control and effect of cyanide decomposition, recent developments in the plating field, test procedures, etc.

A special round table question period will be conducted on the evening of the 16th. All speakers will be present to answer questions from the floor.

Metalwash Machinery Corp. Appoints Wm. F. Ross

Metalwash Machinery Corp., of Elizabeth, N. J., announces the expansion of sales activities in the Ohio territory with the appointment of William F. Ross by the J. E. Von Maur Co., of Columbus, Ohio, Metalwash sales representative in Ohio, Eastern Indiana and Kentucky.

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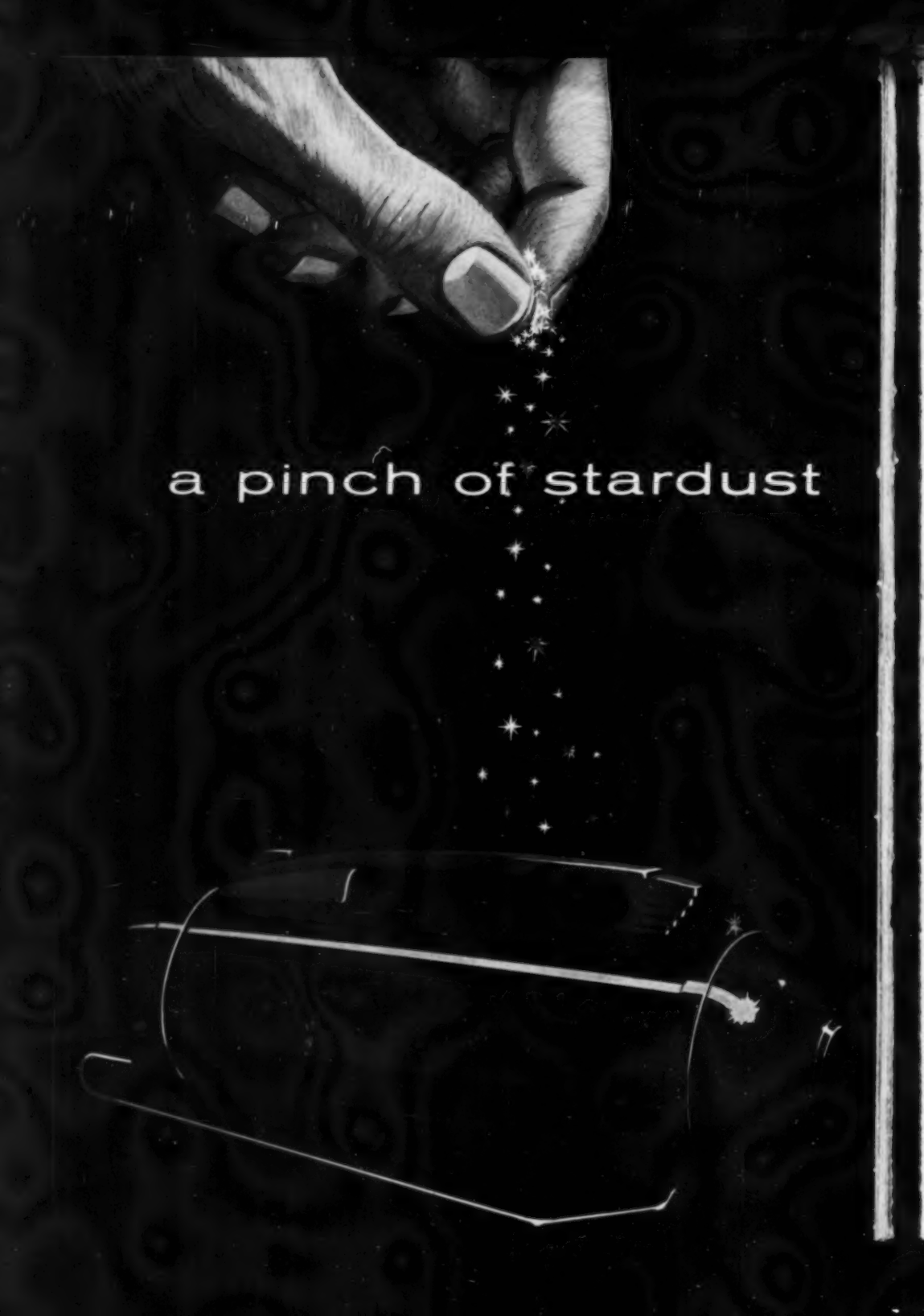
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Formulated for you in a wide range of sparkling colors, Polychrome Metallic Finishes, made with Alcoa Aluminum Pigments, are available from your regular source of supply. If you have never thoroughly explored their possibilities, get the facts. Call your supplier or contact us.

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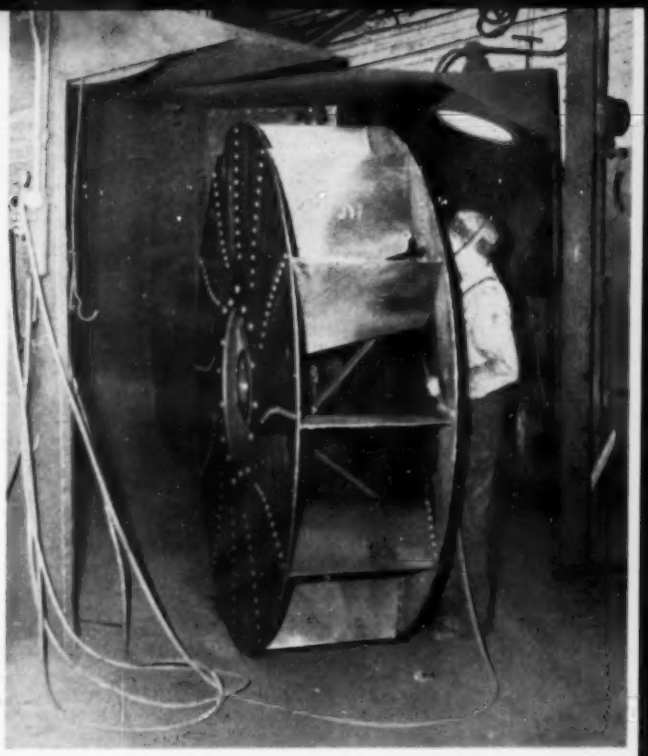

Where possible these big blower or fan wheels are spray painted in a booth but often it is expedient to do the work with hand brushing at the time of final assembly.

BY
WALTER RUDOLPH

Cleaning and Painting Heavy Steel Products

BUFFALO FORGE CO., Buffalo, fabricates numerous sizes and shapes of fans, blowers and ventilating equipment in general—and, in its product painting operations, runs the gamut from hand brushing to modern spray painting. But perhaps the most interesting phase of its operations is that of cleaning the metal in preparation for painting.

The main piece of cleaning equipment is what you might call a merry-go-round. An upright spindle, free to rotate within a sleeve or cylinder, carries three I-beam arms which project out horizontally and equidistantly from its center, at the top. The spindle not only turns easily in its vertical sleeve or cylinder, but it can be raised and lowered as much as 5-ft. by compressed air.

At the outer end of each I-beam arm, there is a well braced cross-arm with hanger rods that reach

[PAGE 37]

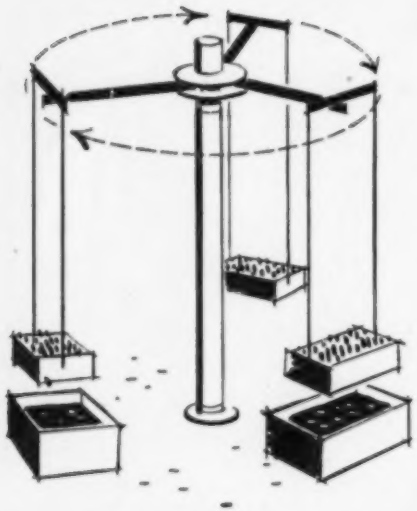

Diagram of merry-go-round for cleaning and rinsing parts before they are painted. The central spindle, to which three arms are attached, can be raised and lowered by compressed air, to dunk mesh baskets of parts in tanks of hot cleaning solution and rinse water.

down to a huge wire mesh basket into which is placed the parts to be cleaned.

On the floor and directly under the baskets which hang from this merry-go-round are three stations spaced equidistantly. One is the loading and unloading station. The second and third are cleaning and rinsing tanks respectively, each one about 4-ft. square by 4-ft. deep, and capable of holding nearly 500 gallons of liquid. Contents of the tanks are heated to 200° to 212° F.

The cleaning tank holds a solution of well-known metal cleaning compound mixed in the proportion of eight to ten ounces per gallon of water. The rinse tank contains plain water at boiling heat.

Baskets of Parts Lowered, Raised, Transferred

Baskets that travel the merry-go-round are about 18-in. in depth, and each one holds close to 1000-lbs. of metal parts. They can be made of heavy wire mesh or expanded metal, with steel flats for the frame work and reinforcing. Bars run midway from the sides of the baskets to the I-beam crossarms above. The central rotating spindle affords a 5-ft. lift through air power (plant pressure of some 90-lbs.) derived through an air cylinder beside the center pole. The lift is controlled by a 3-way air valve. [*To page 40*]

Close-up of mesh basket at the loading and unloading station. One tank and part of the merry-go-round appear in background. This setup is designed for heavy work.

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Baskets are easily moved from one station to another by manually rotating the merry-go-round. Before a basket-load of material is moved away from the cleaning tank, it is raised and lowered several times to agitate the cleaning solution for a more efficient cleaning of parts within the basket. The same thing is done in connection with rinsing. Immersion time runs from 15 to 30 minutes. This takes care of a great variety and number of parts at different times.

Upon leaving the rinse, the cleaned parts are transferred from the merry-go-round basket to a metal box for fork-truck transportation to spray booth areas. Occasionally the shape of some pieces is such that the basket of parts might require air hosing to insure quick drying, but in most cases the surfaces flash dry quickly because of the high heat of the rinse water.

Spray or Brush Painting According to Conditions

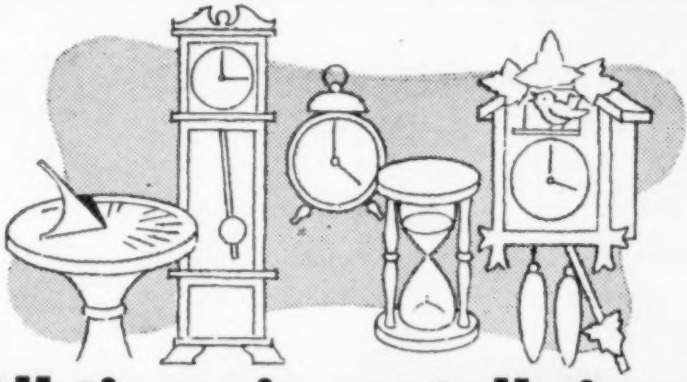
There can be little or no standard procedure from now on, in painting Buffalo fans, blowers, etc., as this is so much like a job shop work—and customer specifications are as varied as you can imagine. Many customers paint these products after they have arrived at their final destination, to harmonize with the surroundings and particular working conditions.

But Buffalo does have a standard red oxide primer for the inside surfaces, and a steel blue for the exteriors of its products. A well known brand of synthetic enamel is mostly used—but here again, the customer is boss. Depending upon specifications again, from one to four coats of paint may be applied before a product leaves the plant. Wherever possible, the piece or the assembled whole is spray painted in an ordinary air-exhaust spray booth, the operator working from 5 or 10-gallon pressure tanks.

Many of the products are so large—up to 10-ft. in diameter for a fan wheel, for instance—that a worker simply takes a can of paint and a good brush and expertly paints the assembly right where it is finally assembled.

Rough places in the assembly are cut down and smoothed out with portable grinders and rotary wire brushes.

We might note some metal preparation and between-coats cleaning during assembly. Metal preparation, because of the many welds usually found in fabrication, entails the use of heavy air-powered grinding and brushing wheels. This work is done at any place where it is most expedient, during the fabrication, taking into account the



All timepieces tell time!

Time is an important element especially when it involves cleaning, stripping, coating or other pre-finish operations. Time is important as an element in quality and in cost.

Difficulty in attaining the result you seek may be matter of timing only. Klem Engineers will not only specify the proper chemical for your job, but steer you in proper application, timing, temperatures, concentrations, etc. The extensive experience of this organization and lab facilities for exactly duplicating your conditions make possible more accurate analysis and recommendations.

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MINIT KOTE—Cleans, neutralizes, phosphatizes ferrous metals and aluminum surfaces in 60 seconds for better paint adhesion.

BRITE KOTE No. 80—Protective dip before storage of copper and brass, removes all oxides and stains—an excellent protection from further corrosion

KLEM KLEANER No. 167-PG—Still or soak tank cleaner for non-ferrous metals. Economical, efficient—will safely remove normal types of soil.

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KLEM KOTE

Cleans and conditions iron, steel and aluminum surfaces, imparts a fine phosphate coating on metal surfaces for better paint adhesion. KLEM KOTE is non-toxic, non-inflammable, requires no special handling precautions Write for details.

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size of the part or product. Wire brushing usually follows grinding.

When prime coated parts that have been in stock for some time are brought onto the assembly floor and put together, the complete assembly must be wiped clean before further painting. Buffalo uses mineral spirits and clean wiping rags for this job, wetting the surface, and then wiping it dry.

Five Keys to Control of Production

PRODUCTION CONTROL is essentially a state of mind, not an overabundance of routines, procedures and forms, W. W. Gilmore, president of the Micro Division of Minneapolis-Honeywell Regulator Co., recently advised executives attending the American Management Association's national manufacturing conference in New York.

Gilmore said that this state of mind, starting with top management, means "a healthy respect for scheduled dates and care to see that dates are not set that can't be met. For this, industry needs just enough production control to do the job without frills." He recommended that management eliminate excessive forms and procedures that do not help meet scheduled dates.

The five main steps suggested are as follows:

1) Enough raw material in the plant to govern production, based on the amount of flow time available for replacement of parts.

2) A set of books that tells accurately how many parts are

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available at all times to meet production requirements.

3) Enough parts on order and scheduled in to replace all inventories as used.

4) Departmental scheduling according to machines and personnel, so that dates may be established as to when parts are needed in next department.

5) Assembly scheduling on a man-hour-per-unit basis which permits shipping schedules to be met on time.

Forms must be designed to meet the customer's own needs, Gilmore declared, because operating conditions of different plants in different localities vary. "There is no group of forms which will be everything to everybody," he emphasized. The job of individualizing forms to fit a particular business is not difficult, if you bear in mind that the simpler you can keep any form or routine the more effective it will be.

To make an effective production control system, according to Mr. Gilmore, the purchasing, production, and sales departments all must cooperate. These three departments are not "three kingdoms which function separately and on their own whims. They are part of an over-all plan and must operate as a team."

Allen Is Sales Mgr. for Pittsburgh's Forbes Div.

Appointment of Myron B. Allen as sales manager of the Forbes Finishes Division of Pittsburgh Plate Glass Co., is announced.

Prior to his appointment, Mr. Allen was assistant manager of Industrial Sales at the Milwaukee, Wisc. Paint Division. He succeeds the late Lyman J. Lamb who died in January.

Mr. Allen has been with Pittsburgh Plate Glass Co., since 1927 when he joined the paint division's industrial sales offices in Milwaukee. For 17 years he served as industrial sales representative in the midwestern states.

"We are in Trouble; Go, fix the Paint"

BY SERVICEMAN

GETTING THE FACTS has always been one of the most difficult aspects of the job of a technical serviceman for a paint company. Trouble that occurs in the paint department is always serious, and only rarely can it be solved by a quick look around the shop. Just as in a doctor's office, a diagnosis must be made; and the more facts that are available, the more accurate the diagnosis will be. However, to make things more difficult, there is usually present an attitude like that of the old maid's, who tells her physician, "I'm sick. You're the doctor, you tell me what I've got." Then she sits there, volunteers nothing, and gives general answers to specific questions.

This attitude is widespread among paint users. One of the reasons for it is the almost universal belief that when something is wrong in the paint department, it is always the fault of the paint being used. Nine times out of ten they are wrong. (It must be admitted that a smart paint mixer, with sufficient time to do his job, can reverse these percentages.) But being wrong most of the time doesn't change the paint user's attitude of "You are wasting time. Quit fooling around. Go fix the paint."

Digging out the facts in these circumstances is not easy. Not that the customer is unwilling or untruthful. He always tells the truth, and nothing but the truth. But extracting the *whole truth* from him is another matter. In his defense it can be said that he may not know what is pertinent or important information. The things he leaves unsaid may seem to him to be unrelated to the problem, but among them probably is the vital bit of information that would make the solution of it just another routine matter.

Chance Remark of Helper Got Me on the Right Track

The *whole truth* may not even be known to the foreman or supervisor. I investigated one case of trouble that was solved through a casual question put to one of the helpers in the department. I was making a test, and she happened to be working nearby. She was curious as to the progress of the investigation, and I repeated some of the questions I had asked the foreman. One of her answers contradicted his. It developed that she was the only person in the department who had been aware that normal procedure had not been followed when the

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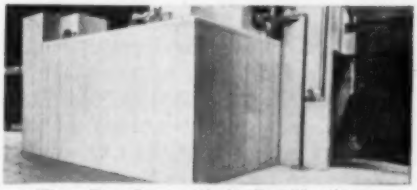

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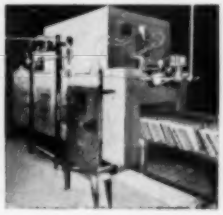

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trouble occurred. The foreman had not lied; he had not known.

Anything less than the *whole truth* can often be misleading. The more complicated the situation the more conducive to delays this can be. Hours are lost while the serviceman goes galloping off on a wild goose chase. An example of such a misleading answer, in a complicated situation, happened to me just recently.

Baking Primer Went Bad; Detective's Job to Find Why

A baking primer was not acting as it should. Basically, two things were wrong: 1) The paint was not quite up to standard; 2) a pump which controlled fluid pressure, and therefore film thickness, was operating erratically. Neither of these things were known in the paint shop, and before I arrived the group leader had tried some experiments with viscosity and solvents. It so happens that viscosity, solvent, and film thickness are all critical in this formulation. A variation of any of them strongly affects the quality of the finish. In this case the finish was poor because the film thickness (and the quality of the paint) was not up to standard; and changing viscosity and the solvent had made no improvement.

During the early question and answer period I had asked the foreman about the solvent. The precise answer he gave me was, "Well, we tried xylol and hi-flash, but it didn't make any difference." What he had left unsaid was that after the experiments they had not gone back to the specified toluol, but had used the slower evaporating hi-flash.

I thought he knew better than to switch solvents, and changed my line of inquiry. In the normal course of events the variations in film thickness and viscosity were discovered, and brought back to standard.

Surprisingly, to me, there was no difference in the quality.

After three hours of further juggling with viscosity and film thickness, and baking of samples, I realized that the solvent was a factor in the problem. More questioning brought out the *whole truth* that I should have had long before. With toluol back in the paint, the faulty pump repaired, and rigorous control of viscosity, the finish improved to almost normal, and production was resumed. All that remained was to give the primer a shot of this and that to bring it up to standard.

After this experience I was ready to join the other technical servicemen who are envious of the lawyers. The lawyers put their question to witnesses who are under oath to tell not only the truth, but to tell the *whole truth.*

FPRS Convention In Memphis June 15-18

The Forest Products Research Society will hold its 7th annual meeting at the Peabody Hotel, Memphis, Tenn., June 15 to 18th.

Quality control of wood and wood products, glues and gluing, containers and packing materials, and wood finishing, are just a few of the subjects to be d'scussed.

On the subject of wood finishing it is interesting to note that O. B. Gordon of Behr-Manning will talk on Preparation of Wood for Finishing. Factors Affecting the Integrity of a Furniture Finish will be discussed by Paul O. Blackmore, Director of Basic Development Laboratories, Interchemical Corp. Mr. R. I. Quigley, Vice President of The Lilly Co. will talk on Filler—The Theory and Technique of Application.

Sundstrand *Straight-Line Action* Air Sander saves time...gives more uniform finish!

Here's the proven, *better* way to sand filler on castings. New Sundstrand Single Pad Air Sander gives a fast cut . . . quickly, evenly removes high spots . . . and because of its compact size and *straight-line action* gets into close quarters, up next to edges and moldings. Results in exceptionally fine finish . . . ideal for many other sanding operations on wood, metal, or plastics.

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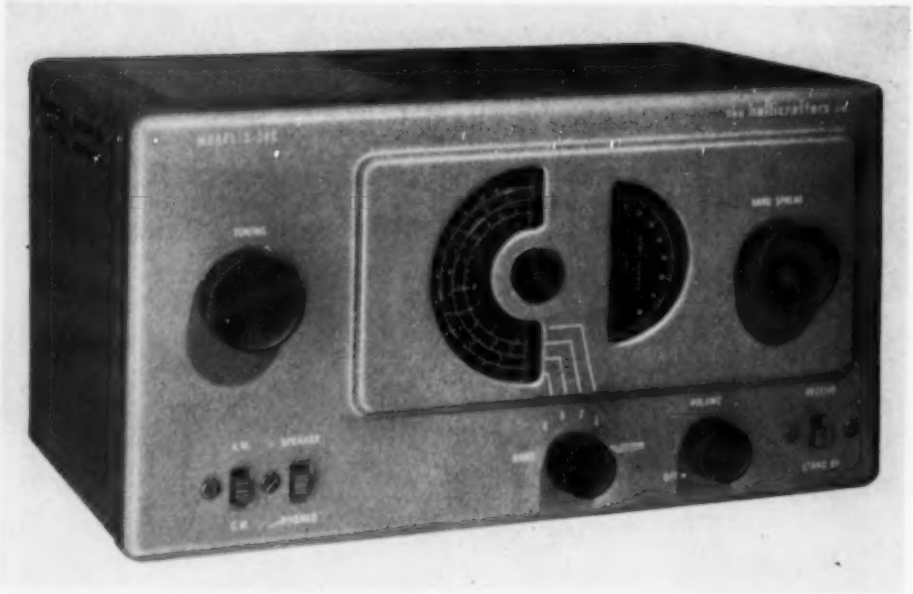
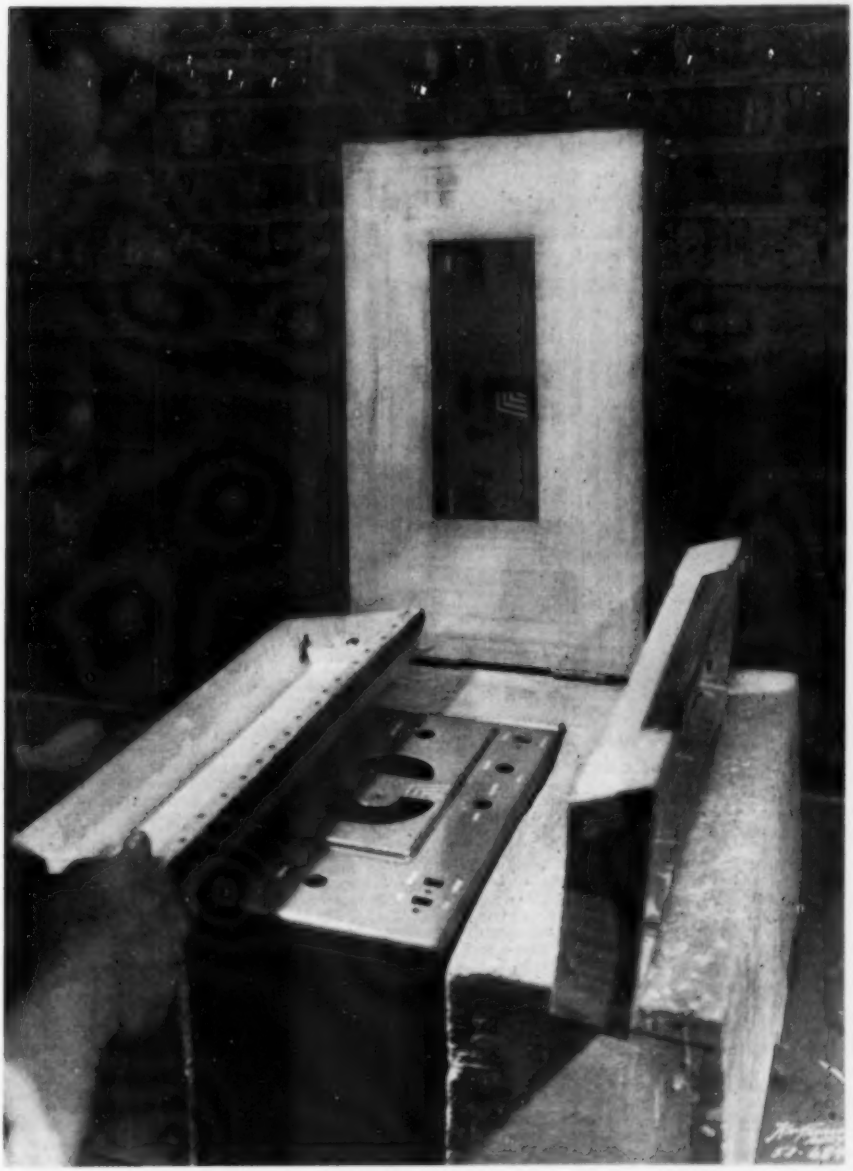


Printing on Finished Metal by

SCREEN PROCESS

BY TONY CAPUA
Finishing Foreman, The Hallicrafters Company

NOW THAT the screen process system is used so extensively for applying lettering, numbers, lines, trade names and decorative effects to so many products, certain problems arise when new models are to be brought out. Special screen process stencils and jigs must be designed and built. These must be simple, safe and easy to use by average factory workers; they must be suited to mass production service, and they have to be absolutely accurate to give perfect registration and clean, clear-cut work. It is interesting to



Radio receiver in boxed jig where three hinged screen stencils are dropped into position, one after another, as operator prints lettering and lines on front of finished metal case.

work out ways and means to solve these problems and put new work on a production basis.

Three Screen Frames Hinged to Single Jig

To screen print the face panel of the Hallicrafters S-38C short-wave radio receiver, which is illustrated here, presented a typical problem. Notice the raised panel on the face of this pressed metal case which is so attractively finished in a popular hammered effect pattern.

The position of the two spots of lettering near the top edge (above the raised panel) and several areas of lettering near the bottom edge (below the panel) indicated the use of two long narrow screen stencils. The word "Band Spread" (at right), the angular selection lines on the raised panel, and the word "Tuning" (at left) indicated a third screen. The word "Tuning" at the left of the raised panel is far enough removed from the panel to permit stretching the silk sufficiently to print this word with the same screen that is used to print what appears on the raised panel.

In order to screen print the entire face panel in three successive steps, to obtain accurate registration and to maintain mass production speed, a boxed jig was made to hold the radio receiver. As shown in the accompanying picture, the three screens are hinged to this boxed jig. After the radio receiver is placed in this snug fitting jig, the three screens are lowered in quick succession to completely print the entire face panel.

The screen process paint is white —an air-drying material and it is usually allowed to dry over night.

Norwegian Paint Executive Visits Glidden Co.

Expansion of the Glidden Company's rapidly growing foreign licensee business into the field of industrial finishes was revealed recently with the visit of Alf R. Bjercke, joint owner of the Norwegian paint firm which bears his name.

The Bjercke firm of Oslo, which as Norway's larges paint manufacturer, has produced Glidden's Spred Satin under an exclusive royalty agreement since 1948.

"One of the prime objectives of Mr. Bjercke's visit is to broaden the scope of that agreement to include technical coatings used in the industrial field," explained A. D. Duncan, Glidden Co., vice president and paint and varnish division general manager.

"He is here also to keep abreast of recent new developments, including Spred Gloss, the latex base enamel, and other products not yet announced publicly."

Mr. Bjercke's tour of Glidden paints in the U. S. points out the complete reversal of position between American and European paint techniques over the past 30 years, Mr. Duncan said.

"European technicians once were ahead of those of America," he explained. "Advances brought about during both World Wars and through demands by American industry for better protective and decorative coatings have now put us far in the front."

Foreign license rights with the Glidden Co. now are held by firms in Australia, Norway, Sweden, Denmark, Japan, Iceland, France, Algeria, Finland, Spain, Italy, Holland, Belgium and Great Britain.

J. E. Rhoads Joins Enthone

Enthone, Inc., New Haven, Conn., has announced the appointment of Joseph E. Rhoads, Cleveland, Ohio, as service engineer, covering the territory of western New York, Pennsylvania, Ohio, West Virginia and northeast Kentucky. Mr. Rhoads will work in conjunction with the sales engineering staff of R. O. Hull & Co., Cleveland distributors for Enthone.

"Joe" Rhoads has had seven years experience in the metal finishing field and a degree of B.S. in metallurgical engineering from Case Institute of Technology.

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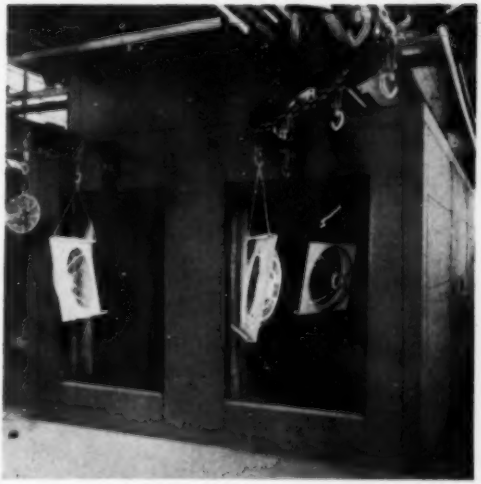

Continuous monorail conveyor enamel baking oven equipped with mechanical air seals.

Young Brothers Ovens are designed and built to meet the most exacting requirements of every baking and drying process.

Leading manufacturers are finding that Young Brothers improve the quality of their products and help them increase production. You, too, can benefit through savings in time, labor and lower costs by installing Young Brothers Ovens. For over 50 years we have been continually developing Batch and Conveyor Ovens for new processes, materials and products. Write for Bulletin 4 today.

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Keep Your Electrical Installations Safe

WITH SO MUCH electrical equipment in use in paint shops and finishing rooms, it is important, in the interest of safety, to always keep in mind that it can be a source of danger. Improperly or carelessly used, allowed to continue in use when it is out of adjustment or in need of maintenance, or if overloaded, it can shock a workman or start a very disastrous fire. Do not neglect it. You are not indulging in an extravagance when you insist upon your electrical equipment receiving frequent inspection, cleaning and whatever attention or maintenance may be desirable to keep it safe under all possible conditions.

Here are ten rules for safe electrical installations, as listed in a Safety News Letter from the National Safety Council:

1) Employ a competent electrician or engineer, making maintenance his responsibility.

2) Keep motors clean and dry. Use only dry air at 30 to 40-lbs. pressure to blow out windings and all electrical parts. Keep cover plates and gaskets in good condition and tight.

3) Don't over-oil motors. Never fill with oil while motor is running.

4) Inspect motors frequently. Note if motor or bearings run hot. Tighten conduit and terminal connections. Check alignment and mounting.

5) Service motors annually. Then measure insulation resistance, keeping

You Can Finish any Metal

BETTER for LESS

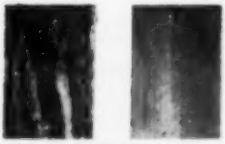
with

VINSYNITE PRETREATMENT

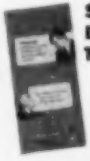
BETTER . . . because Vinsynite combines a chemical pretreatment with a thin film of organic coating. Result is superior adhesion and corrosion-resistance.

FOR LESS . . . because Vinsynite can be applied by ordinary painting methods. No expensive chemical control, heating, water baths or special equipment is required.

Vinsynite works efficiently on any metal. It makes finish coats last longer. Let us send you specific test data and case histories to prove it!



Effect of 500 hrs. ASTM salt spray on oleoresinous paint over bare steel (left); and same paint over Vinsynite (right).



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records so that deterioration can be noted.

6) Keep motor control equipment clean and dry. Keep covers closed. Plug unused knockout holes. Tighten conduit lock-nuts and bushings.

7) Keep all electrical connections tight. Check terminals, shunts, heaters, etc.

8) Keep main switchgear rooms clean and free of storage of combustibles. Be sure of proper ventilation. Check equipment for overheating and overloads.

9) Do not overload circuits.

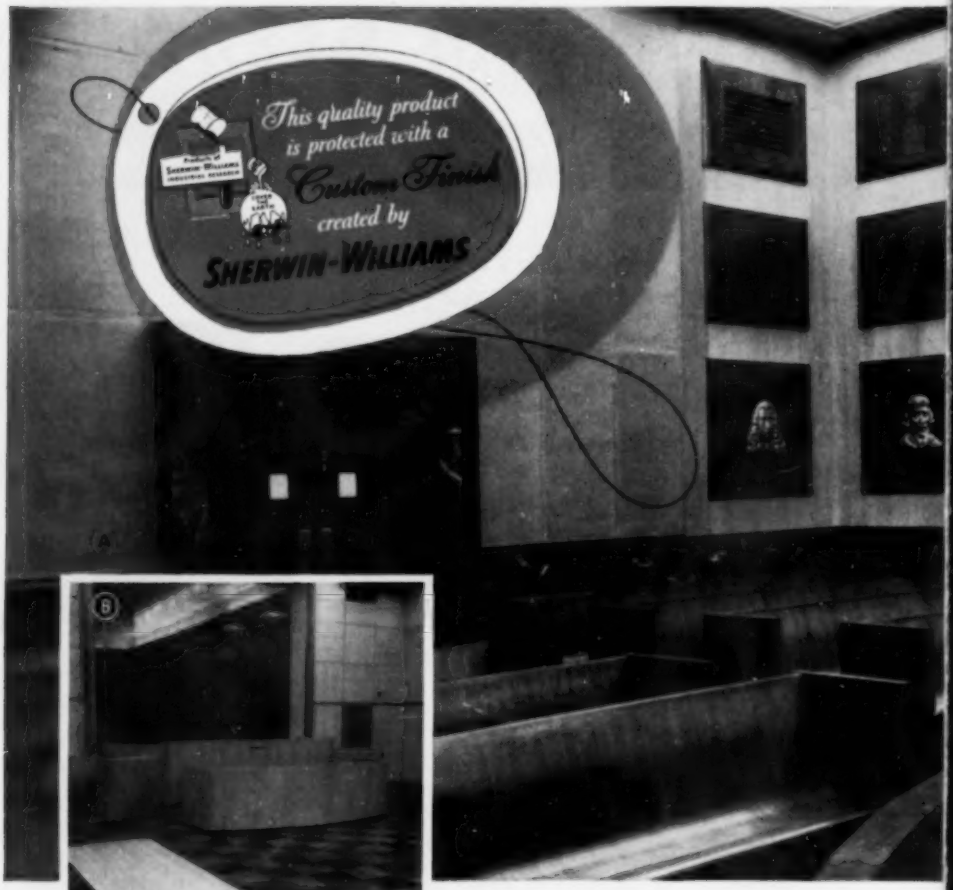
10) Test the lightning protective devices. Test frequently during lightning seasons, checking devices and testing for ground resistance. Keep written records so condition may be evaluated.

Enthone, Inc., Extends Service

Warehousing facilities for the metal finishing chemicals of Enthone, Inc., New Haven, Conn., have been established in Cleveland, Ohio, by the appointment of R. O. Hull & Co. as exclusive distributors in the states of Ohio, West Virginia, the western part of Pennsylvania, part of Western New York including the Buffalo area and northeastern Kentucky. Sufficient stocks will be maintained to make shipments on an f.o.b. Cleveland basis.

Through the active cooperation of Ardo, Inc., Chicago, Ill., Enthone, Inc., has also extended its service and the sale of metal finishing chemicals in the midwest. Ardo, Inc., is now exclusive distributor of these chemicals in western Michigan and the state of Indiana, in addition to the former territory of Illinois, Wisconsin, Iowa and Minnesota. Warehouse stocks are maintained in Chicago. Service to this area is extended by Robert Goodsell whose headquarters remain in Chicago.

Distribution of Enthone chemicals in Canada and warehousing of many of its products will be handled by Armalite Co., Ltd., Toronto, Canada. Active coverage of the provinces of Quebec and Ontario is accomplished by Armalite's sales and engineering staff.



(A) Rear view, Court of Appeals. Curved railing, form-fitted benches and part of sidewall paneling (also rostrum, jury box, spectators' benches—not shown) are made of straight-grain walnut. Plaques in corners (and on sides of rostrum) are burl walnut mounted on bleached walnut paneling.

(B) Courtroom with korina (straw color) wall paneling—one of three types of paneling used in courtrooms. Benches, rostrum and other equipment are of soft-tone oak.

(C) Unloading prefabricated units after 500-mile truck haul during building construction.

A MILLION PARTS FOR "GIANT PUZZLE"

. . . prefabricated and custom-finished 500 miles from site

There's something extra special about the $12,000,000 U. S. District Court House in Washington, D. C.—the pre-applied finish on the beautiful matched-grain paneling and furnishings.

To meet rigid specifications, special formulations of Sherwin-Williams finishes were applied at the factory by The Globe-Wernicke Co., Cincinnati, Ohio, under laboratory-controlled conditions. More than a million parts were prefabricated and prefinished, then checked against master panels.

99 truckloads and 50,000 aggregate miles later, the parts were assembled on the site into 175,000 square feet of perfectly matched-grain wall paneling, almost a mile of courtroom benches, rostrums, jury boxes, clerks' desks, witness boxes, library bookcases, stacks and other furnishings—in a manner resembling a giant puzzle.

Experience in large-scale operations like this is one of the many reasons why it will pay you to use Sherwin-Williams product finishes and technical help . . . why it pays to contribute the added sales appeal of the "Cover-The-Earth" trade mark with Sherwin-Williams tags, seals or decals. For information, call your Sherwin-Williams representative. Ask for booklet B-767, or write The Sherwin-Williams Co., Industrial Division, Cleveland 1, O.

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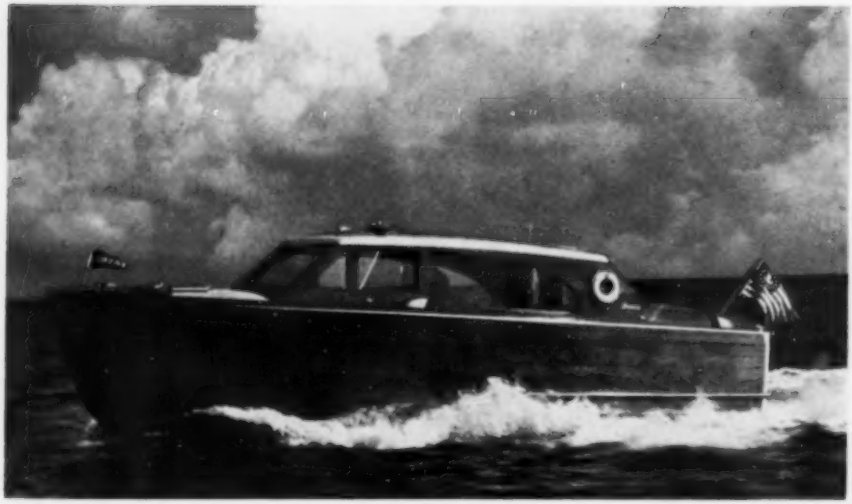

A completed cruiser being tested prior to delivery.

Finishing Owens' Flagships

BY ROBERT M. TRAINER

MARINE FINISHING has become a highly specialized art. The sleek polished cruisers and yachts we see on rivers, lakes and coastal waters today will testify to that.

Keeping in step with modern industrial finishing methods, the builders of "small craft" are now able to present, to boating enthusiasts, end products with a finish comparable to the finish on any fine automobile or like product. New and amazingly efficient fungicides—to name just a few, such as pentachlorophenol, copper naphthenate—are sure death to marine life, worms, etc., which have been the despair of boat owners of the past.

Varnishes and enamels have been developed which incorporate the necessary features of quick drying, flexibility and durability, plus ability to withstand the deteriorating effects of salt water, moist air and hot sun.

As in metal finishing, special attention must be paid to the proper preparation of all surfaces to be painted.

First quality woods are used in the construction of the craft. These

Meeting his specifications is part of our job

If your plant has a government contract, you know the rigid specifications Uncle Sam lays down. Meeting these specifications for finishes is part of our job, for many of our good customers have called upon us to deliver finishes that would satisfy the strictest government requirements.

If you are facing a similar problem, we would welcome the opportunity to consult with you, and demonstrate for you, our ability to create finishes that not only meet but surpass the highest standards! *Write for details, Reliance Varnish Co., Louisville 9, Kentucky.*

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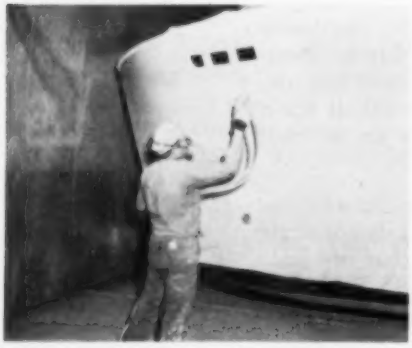
woods may include Philippine mahogany, western cedar, white oak and marine grade plywoods. These are all dipped, individually, into vats filled with wood preservative (copper napthenate) before being assembled.

Pre-Painting Schedule at Owens Yacht Co.

Starting with the interior of a new craft in the white, all debris incidental to its construction is removed. The light debris, such as shavings, small chips, sawdust and sanding dust, is removed by a powerful vacuum cleaner.

To clean the exterior surfaces, an air duster (compressed air gun) is used to blow off all sanding dust and loose shop dirt. Then the entire craft is inspected for cleanliness. This inspection will reveal any imperfections that may have been overlooked previously, and which will have to be taken care of as a part of the surface preparation job.



Spraying a masked cruiser with white, in a booth partitioned off with canvas curtains which can be raised to permit moving the boat after the paint is dry. Exhaust fans in the ceiling carry away all paint fumes.

Sand the surface thoroughly with the grain, using No. 2/0 garnet sandpaper with a sanding block. Wipe the surface with a folded tack rag, re-folding the tack rag to present a clean surface when one side becomes loaded with residue.

Work Schedule for Painted Hulls

Details of the work schedule for painted hulls is influenced by the type of finish being applied, the drying periods required and prevailing shop conditions. However, one typical schedule is as follows:

1) Apply, at package consistency, one light coat of spar clear wood sealer; drying period, 30 minutes.

2) Apply two coats of spar undercoat thinned with the maker's approved thinner, to good brushing consistency. (Sand between coats, using a reliable aluminum oxide production abrasive paper.) The drying period is three to four hours, depending upon shop temperature control.

If imperfections are in evidence, and glazing is in order, glaze after the first coat; then sand both in one operation. Use synthetic glazing putty; drying 30 to 60 minutes.

The Final Finish

1) Apply final finish, thinned 10% to 15% with approved manufacturer's thinner, using good enamel and expert brushing technique — full brush load, well brushed out; watch for runs in preceding work. Allow 24 hours drying period for maximum results. Sand lightly with No. 6/0 aluminum oxide sandpaper.

2) Apply two more coats, following the above procedure. Note: It

AT LAST! A WOOD FILLER THAT CAN BE RECOATED IN 30 MINUTES!

SPEEDYFILL

- Eliminates Drying Time Bottleneck!
- Just as High in Quality as Overnight Drying Types!

Amazing new SPEEDYFILL fulfills a long felt need for a fast drying quality wood filler that can eliminate bottlenecks in finishing room travel caused by slow drying conventional fillers.

Because SPEEDYFILL dries like lacquer and can be recoated 30 minutes after applying in normal air dry conditions, finishing room travel time can be speeded up as much as a full 24 hours — thus increasing production while cutting work in progress inventory.

SPEEDYFILL is a quality filler that passes all conventional laboratory tests for fillers. It has filling properties equal to conventional types; is more flexible, cold check tests show, and there is no spewing, shrinkage, or pinholing.

Don't take our word for it — order a small quantity first and test it under your own conditions!

SPEEDYFILL is regularly available in white, natural, red mahogany, brown mahogany and walnut, but is also available in any color submitted to match.

HANDY ORDER BLANK

Gentlemen:

Please ship me:

QUANTITY COLOR

..... 1 gal. cans of ..... SPEEDYFILL

..... 5 gal. cans of ..... SPEEDYFILL

Firm .....

Street Address .....

City & State .....

Signature .....

BARRETT VARNISH COMPANY

1532 So. 50th Court

Cicero 50, Illinois

a complete line of dependable industrial finishes since 1870

is good practice to wipe the surfaces with a tack rag between coats to pick up any sanding residue from the light sanding between coats, this to insure a clean surface for the following coat.

In some cases the production run may call for varnished hulls and trim. Such a schedule is as follows:

Schedule for Varnished Hulls and Trim

1) Brush on spar filler stains, working the material well into the grain. Allow it to flash dry for five to ten minutes. Then wipe the surplus off with heavy material such as folded burlap. Allow at least 30 minutes for drying before the application of varnish.

2) Apply three to five coats of spar varnish. Sand lightly between coats, using a medium fine silicon carbide or garnet abrasive paper. Allow a reasonable drying period between coats.

Bronze bottom paints, used by all reputable builders, serve a two-fold purpose, namely, to retard and kill marine growth and also to preserve the wood.

Decks may be of the planked type or canvas covered. The seams of planked decks are filled and coated with seam composition which can be applied with a caulking gun or a knife.

Canvas decks are painted so that just the weave is showing; this eliminates the possibility of the canvas cracking as a result of putting on a coating that is too heavy.

All deck hardware is of special aluminum alloy, anodized to withstand corrosive action of salt water and salt-laden air. [*To page 62*]

Here a new cruiser is about to be lowered into water test tank, before its shakedown cruise.

Partial view of the new lacquer laboratory completed last year.

These men are at the disposal of customers with style suggestions and helpful technical service.

Overhead trucks are maintained for prompt and efficient delivery of materials.

Air transport, prompt delivery is available, a service to be appreciated.

Serving the Southeast . . .

- lacquers
- sealers
- fillers
- toners
- glazes
- NGR stains
- pigmented wiping stains

Write, wire or phone us! We offer a complete styling and technical service. Speedy truck delivery.

Snyder BROTHERS COMPANY

Manufacturers of Quality INDUSTRIAL LACQUERS

P. O. Box 548 — TOCCOA, GEORGIA

Interiors of watercraft receive about the same treatment as exteriors. Some inside fittings are custom made to suit the personal taste of a customer.

Within the shop good housekeeping is in order at all times. Spray guns are cleaned and oiled every day. This careful treatment applies equally as well to the brushes. A good procedure is as follows:

1) Dip into thinner (mineral spirits is good enough for the first step), work material out of bristles with fingers or brush comb.

2) Rinse in a second container; spin handle between palms of hands to loosen material. This container should have turpentine—or better yet, a 50/50 mixture of toluol and mineral spirts.

3) Rinse again and spin dry.

Store upright with bristles covered to ferrule.

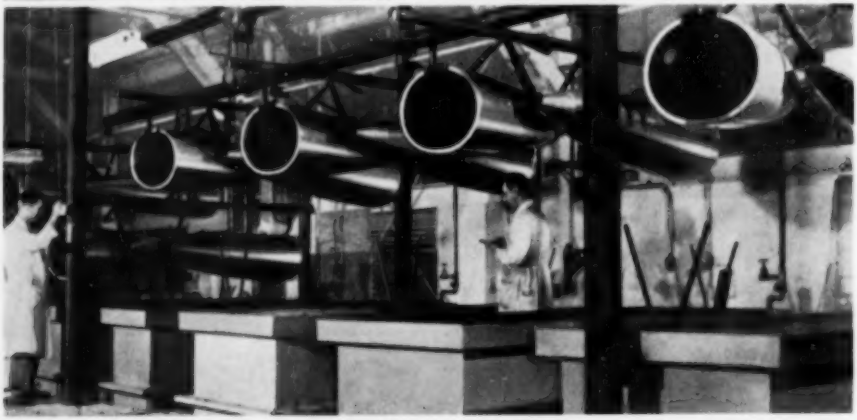
To make a brush keeper, drill a small hole through handle of brush; also through both sides of a suitable container. Insert a stiff wire through holes, suspend brush as just mentioned in a solution composed of half mineral spirits and half toluol. This solution applies only to brushes used for synthetic and quick-drying varnishes.

Glazes, putty and undercoats may be tinted with colors in oil to facilitate better coverage.

Cowles Appoints G. E. Parisho

Cowles Chemical Co., Cleveland, Ohio, announces the appointment of George E. Parisho as Cowles Technical Man in the Metal Cleaner Department for the sales territory of Southern Illinois and St. Louis, Missouri.

George Parisho is well qualified to give valuable assistance to industrial metal working companies, having had extensive experience in metal working and finishing industries.



Anti-Corrosion Dipping—Latest innovation originated by Pastushin Aviation Corp., Los Angeles, Calif., to speed production of jettisonable fuel tanks is a unique conveyor dipping line which immerses jettisonable fuel tank parts into five different baths of preserving chemicals to resist corrosion. The system applies Alodine 600 coatings to the aluminum surfaces of the tanks to meet the requirements of specification MIL-C-5541. Jettisonable fuel tanks are cleaned, rinsed, coated with Alodine 600, rinsed again, acidulated rinsed, and then dried by convection currents—all within five minutes!

A DeBURGH Finishing System by KOCH offers YOUR PLANT:

- LABOR SAVINGS UP TO 50%
- PATENTED "CLOSE-PACK" FEATURE FOR FASTER DRYING
- 16 OR MORE OPERATIONS WITHOUT REMOVING WARE FROM CONVEYOR
- IMPROVED FINISH AT LOWER COST
- PATENTED "MULTIPLE-CYCLE" SYSTEM
- LESS HANDLING COST
- TIMED PRODUCTION SPEED
- SAVING OF FLOOR SPACE
- FASTER INVENTORY TURN-OVER
- A CLEANER DEPARTMENT

PHONE, WIRE OR WRITE FOR DETAILS!

GEORGE KOCH SONS, INC.
EVANSVILLE, INDIANA

How to Cut Patching Costs

BY H. H. CONNELLY

"The best may slip, and the most cautious fall,
He's more than mortal that ne'er err'd at all."

POMFRET IS THE MAN we owe for this ageless piece of advice written many years ago, and he wasn't referring to the mistakes that occur in the furniture finishing room.

Sometimes we blushingly call our errors accidents but accidents or errors, avoidable or unavoidable, they do occur. And the furniture finisher that vows he doesn't have a repair problem has developed a priceless technique for selling his mistakes to the public.

The first solution to this finish repair problem is to recognize that defects, like the poor, will be with us always; stop talking wistfully of when our workmen and processes become so foolproof that correcting our mistakes will be forgotten experience, and train a select group of men to be experts in this line.

Carload of Rejects; No Skilled Repairmen

Found in one corner of a case goods finishing room was a carload of stock that had been shoved back because the defects were too difficult to repair, worth too much as inventory to scrap, yet rapidly becoming out of date. The foreman's reason: the men on repair were not sufficiently skilled to do a good job of putting it in salable condition.

"Who are your repairmen?" he was asked. His answer "sometimes the spray hands. At times the filler crew. Anyone who happens to be caught up at the time."

This same man would have a stroke if the garage where he has his automobile serviced used the first available character who happened to be wearing a pair of coveralls, to repair his car.

Likewise, if you are depending on any individual who happens to be unoccupied at the time, to do your patching, your results will continue to be unsatisfactory.

Have a Patching Specialist And Good Work Facilities

The third logical step toward a solution, after training a specialist, is to provide him with the best work area in which to do the repair. Don't pick out the only available corner. How are the lighting conditions? Good natural, reflected northern light, if possible, is essention in patching and blending colors.

A good man takes extreme pride in his work. Provide him with a suitable work area, a work bench, cabinets and shelves for orderly storing his patching stains, powders, dyes, spray gun, toners, etc. If much spraying is necessary or desirable in connection with the

for color retention on light finishes-here is

CRYSTAL CLEAR LACQUER

WATER WHITE

It's a new, time-tested material for preserving the original color of those beautiful grays, off whites, lime, pearl, sea mist, ermine and all pale, bleached and decorative effects so popular on furniture of today.

Crystal White Lacquer has excellent color retention, and it can be depended upon to protect the surface from the danger of discoloration due to exposure in the store or home.

A free working sample, together with finished wood panels showing the new colors, will be sent upon request. No obligation!

THE SCHAEFER VARNISH COMPANY

INCORPORATED

15TH AND MAGNOLIA LOUISVILLE, KY.

repairing operations, a spray booth should be located near by.

Repairs Made Early, Can Save You Money

Remember the proverb about a stitch in time . . . .? This applies to furniture repairing, too. One timely example of how an early repair will save pennies is that of catching dents and small cross-grain scratches before too much work has been spent covering the defect with lacquer. For once a scratch passes through the stages of staining, filling, sealing and top coating, the repairman must remove applied coats of finishing material and go all the way to the bottom before he can make a good repair.

Finish patching calls for skilled workmanship but it can be the means of salvaging many damaged pieces. You can save on patching costs by finding and repairing scratches and marred places as early as possible in the course of manufacturing.

The fourth gimmick therefore for cutting repair bills is to do them early. Give all furniture a thorough going over with a fine-tooth comb while it is still in the unfinished stage. Raise dents by touching a drop of water to the wood; then place a hot iron on top to steam it dry.

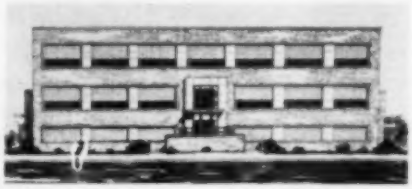
A clean soldering iron serves as an excellent tool. A burning-in iron is another handy tool for doing the job. Some men prefer a 1500-watt Cromolox heater with a handle attached — anything that gives an even heat, not hot enough to scorch the wood but warm enough to boil the water. The spot should be sanded lightly with No. 6/0 sandpaper after raising the wood fibers.

Deep cross grain scratches may require repeated sanding, wetting, and drying. Shallow scratches can usually be removed with light sanding only.

This catching defects early is like keeping traps out for mice. When you let up, the mice multiply. Repeatedly check behind staining and filling. Here you will see best the light spots caused by glue clinging to the wood surface from the assembly department. If these glue spots are not removed, the stain will not penetrate the wood—and you will have a defect that must be removed later, below the coating.

Jones-Dabney to Build New Laboratory

A 3-story, air-conditioned research laboratory is now under construction for Jones-Dabney, the Industrial, Marine, Resins & Chemical Division of Devoe & Raynolds Co., Inc.



New research laboratory at Louisville, Ky.

Covering nearly 22,000-sq. ft. of floor space and devoted entirely to research in the resins, chemical and finishes field, this laboratory is located at 1481 S. 11th St., Louisville, Ky., adjacent to the company's present laboratory, which will be converted to administrative and factory offices.

AIR-DRY OR BAKE

SPRAY, DIP OR BRUSH

FOR PRODUCT FINISHING AND INDUSTRIAL MAINTENANCE

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...the modern multi-purpose enamel!

Here's the versatile finishing material industrial users asked for—KEM LUSTRAL—*one* top-quality enamel that gives you all these advantages . . . and more—

—will air-dry or bake

—may be brushed, sprayed or dipped

—has outstanding durability, gloss retention and weather resistance—interior or exterior

—does double-duty as a product finish or for maintenance painting

—gives lasting protection for wood or metal.

KEM LUSTRAL is one of a complete line of industrial quality product finishes available through Sherwin-Williams Branches in all principal cities. Consult your classified telephone directory for location of Branch nearest you. Ask for a copy of KEM LUSTRAL Brochure KL-511. Or write The Sherwin-Williams Co., General Industrial Division, Cleveland 1, Ohio.

Services of trained industrial finish specialists available in your area through nearest Branch

Your 'on-the-spot' source for PRODUCT FINISHES

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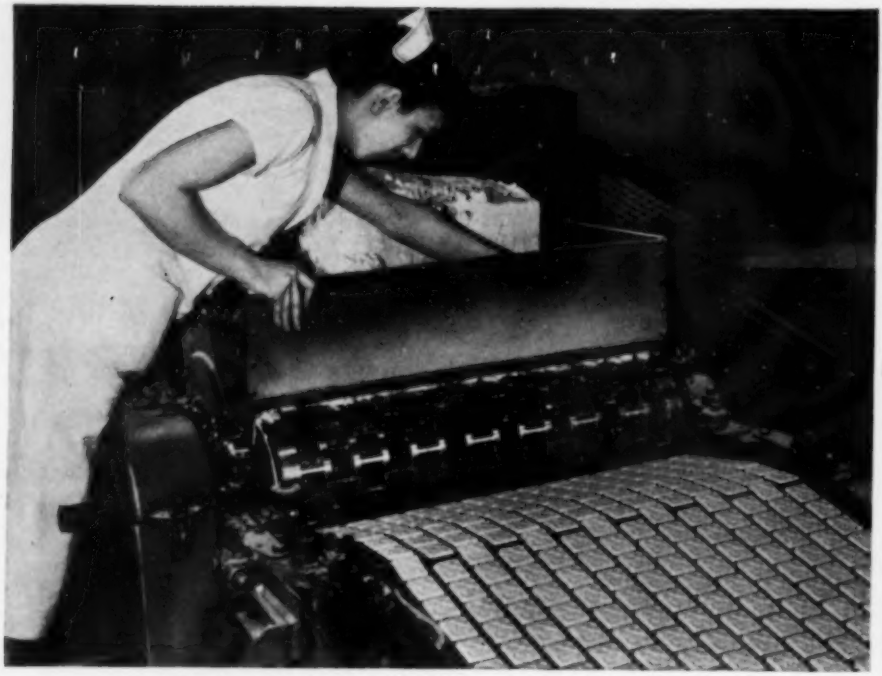
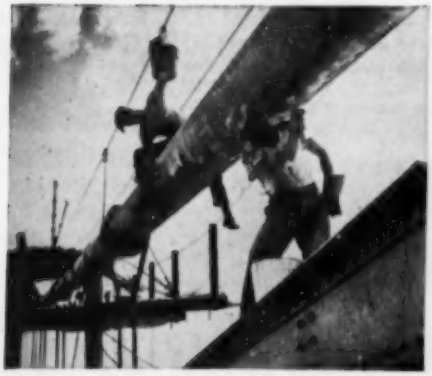


METAL-CYLINDER "COOKIE ROLLS" like this one turn out an endless parade of clean-cut cookies when molds are coated with TEFLON Finish.



HUNDREDS OF FEET UP on a bridge, painters work swiftly with DULUX Metal Protective Paints. DULUX has given up to 15 years of protective service on exposed structural steel.

FAMOUS QUALITY DUCO Lacquer and DULUX Furniture Finish on fine pieces put a gleam in the customer's eye . . . have helped furniture retailers clinch millions of sales.

Cookie molds with TEFLON finish make a better impression

REG. U.S. PAT. OFF.

Du Pont's new TEFLON polytetrafluoroethylene finishes have a unique quality: *practically nothing will stick to them.* This property—plus its chemical inertness and extreme resistance to high and low temperatures—is helping industry reduce production costs and save labor.

A bakery in New Jersey had a problem in the production of intricately designed cookies. The cookies often stuck in the molds on the "cookie roll," or dropped out in pieces. To keep the designs clear the molds had to be cleaned often—a careful, time-consuming chore. Then the rolls were coated with Du Pont TEFLON. Now the cookies always drop out cleanly and carry a sharp impression. There are almost no rejects.

Another bakery installed a forming roller finished with TEFLON to handle dough in making of fraction-of-an-ounce oyster crackers. The day after the roller was put in, production increased 1,500 pounds.

Du Pont TEFLON finishes have many other important industrial applications; they are among the 12,000 formulas for Du Pont Finishes at work in industry today. If you want to cut production costs, or make a product sell better, work better, or last longer, contact the Du Pont Sales Technician in your area or write to E. I. du Pont de Nemours & Co. (Inc.), Finishes Div., Wilmington, Delaware.

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Better Things for Better Living
. . . *through Chemistry*

DUCO AND DULUX ARE REG. U. S. PAT. OFF.

Flock—what it is, its appearance (textures and colors), its uses both for utility and decoration, how it is applied, what preparation and follow-up work is needed, its merits and its possibilities.

By P. C. BARDIN

THERE IS NO mystery about flock finishing. One basic series of simple operations always applies, namely, coat the clean surface with a suitable adhesive, apply flock fibers, allow the adhesive to dry and finally, remove the surplus fibers that have not adhered to the surface being flock coated.

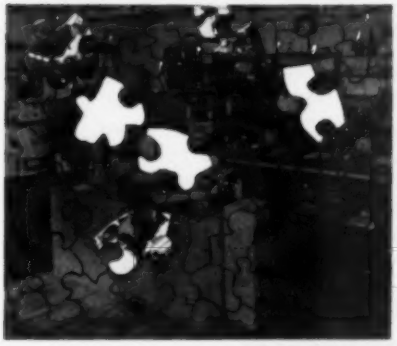
The type of product and its end use are the chief factors to consider when choosing the kind of adhesive and flock fibers to be used. The size and shape of the product will govern the methods of application for both the adhesive and fibers. The volume of production will be a decisive factor in determining what method of handling to use.

Chief Purposes of Flock Coating

Numerous uses have been found for flock coated surfaces. A few include certain decorative areas on greeting cards, advertising displays, novelties, etc. Flock coatings for protection include their use as a lining for silver chests and cabinet drawers, inside containers for fragile objects and delicate instruments, and for the bottom surfaces of book ends, table lamps and various ornaments to prevent them from scratching the tops of furniture. For both appearance and touch appeal some toys and certain gift articles are coated with flock.

For identification you often see stenciled flock coatings, in one or more colors, used as emblems, trademarks or lettering on various products, athletic shirts and jackets. Flock coatings are often used as a sound deadener coating in aircraft and automobiles . . . . and for covering automotive seat spring units.

Many different kinds of flock fibers are available. Those most widely used are rayon, cotton, wool



QUALITY

Completes the Verlon Picture!

Rigidly maintained quality control . . . one reason why

VERLON

flock is always clean . . . soft . . . uncontaminated . . bright . . . dry . . . smooth flowing. We think it's the best today — and constantly being improved.

Quality Control . . . *foundation of reputation*

The photograph above shows a section of the Verlon Laboratories, where continual and careful attention to minute detail is an unvarying routine.

Here over 2000 color samples are retained to assure close color matching. Here the terms Verlon Micro-Cut and Precision-Cut fibres take on literal, exact meanings. Here the latest and finest scientific equipment control Verlon quality—not periodically, intermittently or through spot-checking—but as an integral part of the production process.

From selected raw materials right down to the packaged product, quality control is the order of the day—every day—for Verlon flock!

Write for color samples and price lists.

VERLON TRADEMARK **Vertipile, inc.** FLOCK DIVISION LOWELL, MASSACHUSETTS

and animal hairs. However, flock material may be composed of ground leather, synthetic fibers, hemp or straw fibers—in fact, any material capable of being cut to either precision standard or random lengths.

Rayon, wool and animal hair fibers are available in definite millimeter precision standard lengths. Cotton flock is generally furnished in random lengths. Wood cellulose fibers, leather and similar materials are sold in densities of pounds per cubic foot. From these fibers three general classifications of surface are produced. Long precision-cut fibers produce a high-pile surface. Short cut fibers produce a low-pile surface, and the ground materials can be used to produce special effects such as suede leather, etc.

Flock Adhesives; Which To Use and Why

Generally speaking there are three types of flock adhesives—synthetic enamels, lacquers and water soluble adhesives. It is not advisable to use ordinary finishing materials as flock adhesives. Enamels and lacquers, if or when used, should be specially formulated for this work. A clinging wet coating of adhesive must be used and it must remain "sticky" for several minutes or long enough to properly receive and permanently retain light-weight flock fibers, applied by whatever method may be used. The color of the adhesive should match the color of the flock to be applied.

Special attention should be given to the selection of an adhesive, as it must be compatible with the product on which it will be applied (especially in the case of plastics), the type of flock to be used, and the end use to which the final product will be put. For instance, a water-soluble adhesive could be used for flocking a product that would have only limited or temporray use, and where no moisture is involved; but for more permanent service, where some water resistance may be required, a tough fast-drying chlorin-

On the instrument panel of an automobile this leopard skin effect is produced with flock. Photograph furnished through the courtesy of Coast Industries, Los Angeles, California.

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Surface Coating

DECORATIVE
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"RAYCOTE"

Controlled length rayon flock for velvet effects

"RAYMIX"

Rayon flock for suede effects

"KINGCOTE"

Cotton flock for suede effects

DAYGLO ®

in Fluorescent Colors

Write for Latest Folder

RAYON PROCESSING CO. of R. I.

Pioneer Producers of Surface Coating Flock

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PAWTUCKET, R. I.

Animal toys made more realistic to the eye and to the touch with a covering of flock. Photograph, courtesy of Coast Industries.

ated-rubber-base synthetic enamel is recommended.

Applying Flock Adhesive Like Paint or Lacquer

Flock adhesives may be applied to the surfaces or products by spraying, dipping, flow coating, roller coating or by the silk screen process.

Spraying would probably be the logical choice for coating objects that have an uneven contour—and particularly if only part of the surface of each item is to be covered with flock, or where it would be necessary to apply the adhesive through a mask.

Dipping is often used to apply the adhesive on small articles to be coated with flock all over—and those suitable for dip coating insofar as complete draining is concerned.

Flow coating might be used on products that have a complex surface construction, such as coil spring assemblies.

Roller coating of the adhesive is possible and often desirable where the entire surface of a flat sheet, ribbon or panel is to be coated.

For these same flat objects, where only partial coating is required, such as a design, or where a border around the outer edge is not to be

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CLAREMONT FLOCK
Quality-Famous

coated with flock, the adhesive can be accurately applied by the screen process method.

Several Methods of Applying Flock

Flock fibers can be applied to wet adhesive coated surfaces by electrostatic means or spraying, sifting, vibrating, or in a flock chamber. Let us give each of these methods a brief bit of attention.

The electrostatic method consists of electrically charging the flock fibers by passing them through a high voltage electrostatic field from which they are strongly attracted to prepared products moving along on an electrically grounded conveyor. This method is similar to electrostatic painting; it is patented and is available only through lease arrangement with holders of the patents.

Spraying flock fibers means just what the name implies—spraying the fibers from the nozzle of a spray gun, in either a fan or jet shaped spray, by means of compressed air. For small or limited production the flock may be sprayed from a container attached to the spray gun. Another method—used where larger

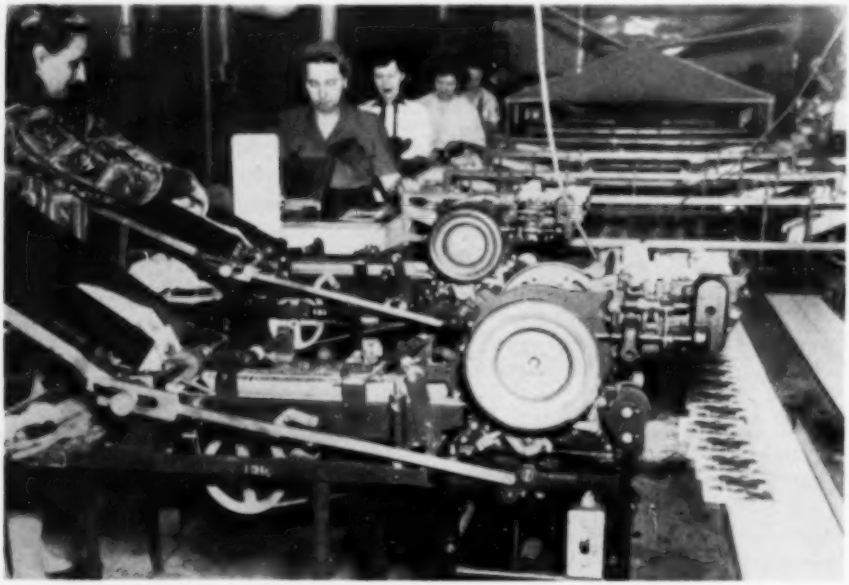
Ballerina slipper, the upper part of which is flock coated. Photo from Synthon, Inc.

volume production is required—is to feed the flock fibers under air pressure from a storage tank to the nozzle, through a material hose.

Sifting the fibers onto the wet adhesive may range all the way from using an ordinary hand operated flour sifter (such as may be found in a kitchen) to mechanically agitated screens. When the latter method is used, the products to be coated with flock generally pass through an enclosure while resting on either a wire mesh or canvas belt conveyor under which angular beater bars rotate to cause the belt and products on it to vibrate or bounce rapidly.

The application of flock by vibration can be accomplished by using a shallow box which has a taut canvas bottom with high speed beater bars mounted so as to rapidly vibrate the canvas. Small thin flat pieces, such as paper, cardboard or thin gauge metal, coated on one side with adhesive, are placed on the vibrating canvas which contains a supply of dry flock fibers. Rapid vibration causes the fibers to bounce up and down and become imbedded in the adhesive. Vibration also sets up static electricity which aids in causing the fibers to embed themselves on end in the adhesive—which is desirable.

A flock chamber can be used most effectively in connection with a conveyor setup. The enclosure has no openings except for the en-



Flocking greeting cards at high speed. Modified multigraphing machines, as well as hand screeners, apply the adhesive. Flocking is done electrostatically by equipment leased by International Industrial Developers, Inc., Pawtucket, Rhode Island. The equipment consists of high voltage power supply and Lindquist Flock Delivery System . . . .

"LIQUID ENVELOPE"

PEELABLE SPRAY-BOOTH COATING

THE FIRE-SAFE—LABOR-SAVING METHOD THAT ELIMINATES HEAVY OVER-TIME FOR SCRAPE DOWNS

You'll never know how simple and easy . . . and inexpensive . . . it is to peel-off all accumulated overspray until you use "LIQUID ENVELOPE", the original and still the most satisfactory "strip coating". Why not order a 5 gallon can at the drum-lot price today? Get acquainted offer limited to new users only.

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trance and exit of the conveyor, and these openings have air locks to prevent flying flock from escaping into the room. Flock fibers may be fed into the chamber from above by gravity feed, or by means of screw conveyors located just below the floor of the chamber. In either case the quantity of dry flock fed into the chamber must be controlled.

The flock fibers are picked up by strong, cross air currents and circulated inside the chamber until the atmosphere in the enclosure resembles a heavy snow storm. As products move through the chamber by conveyor the fibers attach themselves firmly to the wet adhesives. Here again, some vibration of the product is advantageous because it aids in the attachment of the fibers, and also because unattached fibers are promptly shaken off to resume circulation in the chamber, thus relieving to some extent, the work of deflocking afterward.

Dry the Adhesive in Flock Coated Surfaces

Flock coated surfaces may be air dried, forced dried or baked. For exceedingly small production, air drying may be sufficient. If force drying or baking is employed, the temperature in the oven (or the product temperature) should not exceed what is recommended by the supplier of adhesive. This is especially true where chlorinated rubber base adhesives are used. Drying of the flock coated surface is extremely important; it must be thorough. Products should not be packed for shipment (even though they have been force dried) until after a reasonable cooling and subsequent air conditioning period has been allowed.

The lining and pockets of this brief case are coated with flock. Photo from Synthon.

Removal of Surplus Unattached Flock

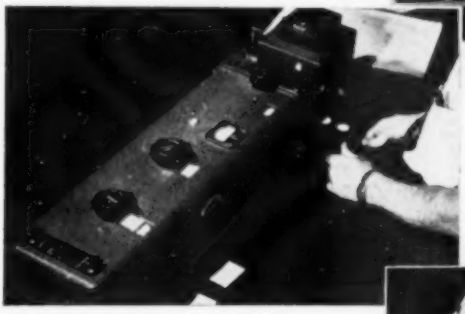
After a flock coated surface is thoroughly dry, the final operation consists of deflocking or the removal of any loose surplus fibers which may remain embedded but not adhered to the flock coated surface. This operation may be accomplished by reversing the product on an open mesh conveyor belt which rapidly vibrates inside an enclosed chamber and close to a strong exhaust duct in the chamber. As the loose surplus flock fibers become free of the flock coated surface they are picked up by suction and carried through a pipe to a cyclone, and thence into a container to be accumulated for re-use.

Another possible method of deflocking would be to pass the flock coated surfaces over a series of stiff bristle brushes inside an enclosed chamber. These brushes would be positioned directly over or

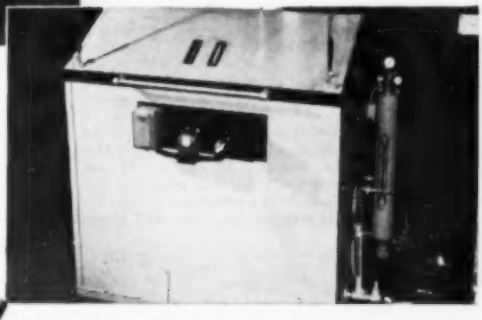
Finishing problems? Call on our

20 HAPPY WORRIERS!

THE PRIDE AND JOY of Jamestown Finishing Products Inc.'s new modern plant is the laboratory with its 20 research chemists — all expert at "worrying out" solutions to your finishing problems. Here a workman is checking the gloss, reflective quality and uniformity of color of a batch of AVALEX lacquer.



SPECTROPHOTOMETER — Jamestown chemists constantly analyze, study and improve to maintain the superiority of AVALEX industrial finishes. This spectrophotometer scientifically and accurately measures color values to make sure the finished product is just what the customer ordered.



TEST CABINET subjects Jamestown finishes to rigorous salt-fog corrosion and humidity corrosion tests. These are but a few of the quality control measures that make AVALEX industrial finishes worthy of your product. Let us help you with your finishing problems!

AVALEX lacquers, enamels, stains, varnishes and other industrial finishes are products of

JAMESTOWN FINISHING PRODUCTS, INC.

Established 1911

Jamestown, N. Y.

"BETTER FINISHES THROUGH RESEARCH"

These TINY, COLORFUL, PRECISION-CUT FIBERS...
Industry's Most Versatile Product
Cellusuede FLOCK
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The unending variety of uses for Cellusuede Flock stirs the imagination of industry's most progressive minds. Cellusuede adds COLOR APPEAL in packaging, paper, and many other fields . . . gives an intriguing RICH TEXTURE to fabrics and toys . . . SILENCES unwanted noises when used as an acoustical material, everywhere from architecture to aircraft . . . DAMPENS VIBRATION in radio grills and phonograph turntables . . . INCREASES STRENGTH when used as a filler in plastics and rubber . . . thousands of uses, and every day designers, engineers, research and production men are finding more applications for Cellusuede Flock.
ENGINEERING SERVICE
Call on Cellusuede engineers and research men, without obligation, for data on how Cellusuede Flock may be applied to your job. WRITE FOR NEW BULLETIN illustrating profitable uses and application methods.
CELLUSUEDE PRODUCTS, INC.
PRODUCERS OF NATURAL AND SYNTHETIC FLOCK

under an exhaust duct. Whichever method of deflocking is used, real care should be taken to prevent the new flocked surface from being damaged in the operation.

There are numerous variations in procedure and methods, just as there are many different kinds of adhesives and flock fibers. The basic rule of flock application remains the same. The principle of flocking remains the same. The materials used and the methods employed must be adapted to the particular product and the purpose for which it will be used.

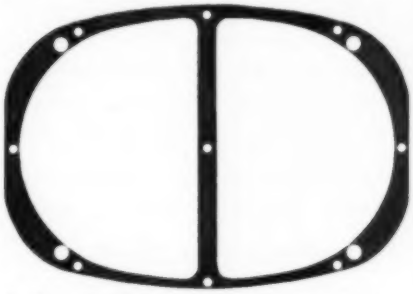
Some experimenting is almost always required when equipment is first set up for flock coating. As the work continues, and as different materials, methods and accessories are tried, a knowledge of how to do the work more satisfactorily and economically is acquired. Eventually, it becomes routine work, with perhaps small improvements being developed and added from time to time. It can be both interesting and fascinating, and the results will be attractive and profitable.

For Gaskets Too—Dust Proof; Shock Proof and . . . .

Editor's Note: In reply to our request for one or more pictures of flock coated articles, we received the outlines of a 6¼x9-in. gasket (see accompanying illustration) and a letter on flock printed stationery from Flock Process Co., 375 Main Ave., Norwalk, Conn., which contains the following interesting information:

"We do not have any photographs but are sending you a print which we use in connection with an auto-

mobile speaker grille. The black portion represents the area flocked by us on the outlines of a perforated steel grille which has first been painted. The flock on the outline and through the center portion is of high pile and serves as a gasket and vibration absorber. In actual



Outline of flock gasket for a special job. Photograph from the Flock Process Co., Inc.

use a bezel fits firmly over the flock gasket, hiding it completely. This is an excellent example of an intelligent use for flock. It is an efficient gasket which excludes dust, and acts as a sound absorber; it is made a permanent part of the grille and makes for ease in assembling.

"We make large quantities of speaker grills of various types and many other flocked items of all base materials such as wood, aluminum, steel, plastics, etc. However, we do not have actual photographs available, since our flocking is entirely on products of our customers".

Polyester Resin Booklet

An 18-page booklet, "Bakelite Polyester Resins for Reinforced Plastics," has been released. It tells all about Bakelite polyester resins currently being produced in commercial quantities, and additional valuable information . . . .

Copies of the booklet may be obtained by writing to Bakelite Co., a Division of Union Carbide & Carbon Corp., 300 Madison Ave., New York 17, N. Y.

M. A. Glaser Gives Talk at Harvard Graduate School

Mr. M. A. Glaser, Vice President and Technical Director of Midland Industrial Finishes Co., Waukegan, Ill., recently gave an interesting lecture entitled, "Industrial Finishes—Present Trends and Future Prospects" at the Harvard Graduate School of Business Administration, as part of the Third Decennial Paint Course sponsored by the New England Paint & Varnish Production Club.

Mr. Glaser pointed out that great strides in the industry have been made during the past 25 years. He also predicted that the next decade would see wide use of Latex Polymers in industrial finishes, silicone coatings for heat, weather and chemical resistance and new polyester resins of wide compatibility.

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• FLOCK EQUIPMENT

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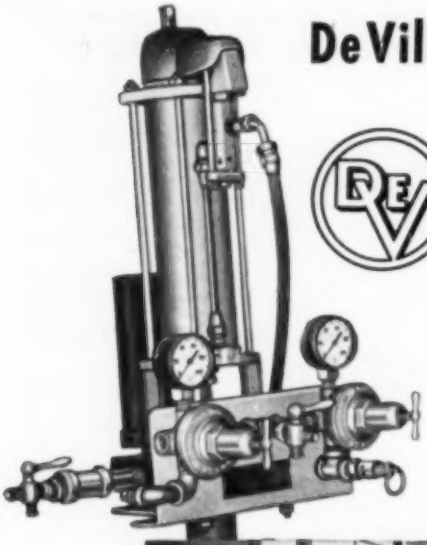
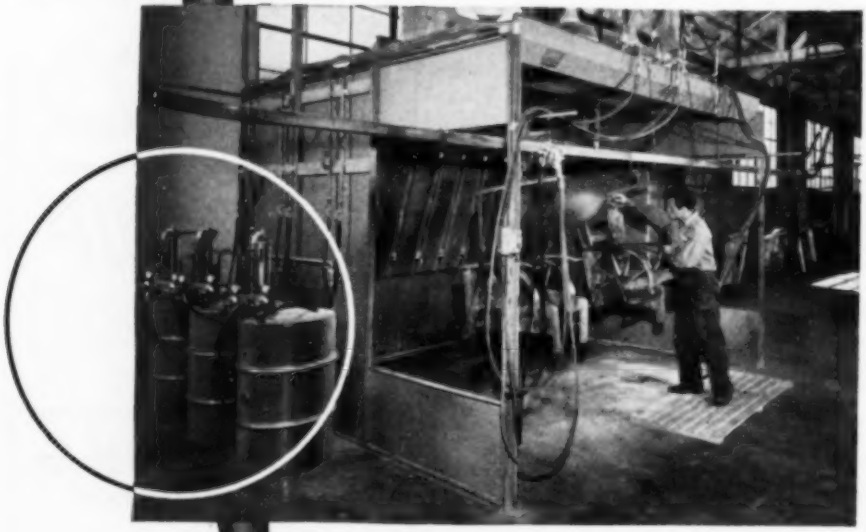


DeVilbiss P-QBD Material

Saves you time, labor and inconvenience of frequently filling small containers.

You get the performance of a pressure-feed tank plus direct-from-drum speed with this DeVilbiss P-QBD Volume Delivery Material Pump!

Available in 10- and 55-gallon



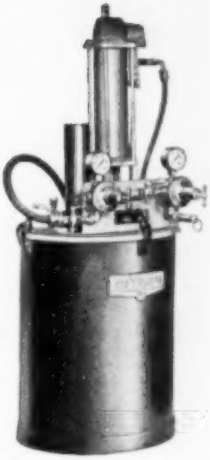
A furniture manufacturer uses three P-QBD Pumps for high-speed furniture finishing. Stain, sealer and finish coat are all sprayed in the same booth direct from original drums to save material-handling time.

BRANCH OFFICES AND DISTRIBUTORS IN PRINCIPAL

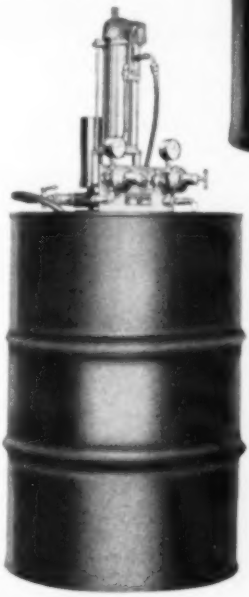
Pump for volume delivery

sizes, the pump develops up to 200 pounds of delivery pressure. It will carry material from a supply point to spray stations up to 1000 feet away or several stories high. As many as eight spray guns can be used per pump; as much as 25 ounces of material per minute can be supplied to each spray gun. The unit operates entirely on compressed air and requires no wiring – an important safety factor where fire is a hazard.

Your DeVilbiss representative can give you complete details on the P-QBD Volume Delivery Material Pump and equipment for use with it: air transformers, spray booths, air compressors, spray guns, hose and connections. Why not give him a call, or write direct to the factory today?



P-QBD-510 Pump. *Supplied with a 10-gallon, hinged-lid tank. Can also be used with a standard 5-gallon container placed inside.*



P-QBD-555 Pump. *For use with all common types of 55-gallon drums. Fluid suction tube slips into bung holes 2¼" and larger. (Drum shown is not included.)*

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FOR BETTER SERVICE, BUY
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CITIES THROUGHOUT THE UNITED STATES, CANADA AND THE WORLD

Hot Spray Units

This Arsenal is interested in obtaining information regarding hot spray units. A list of the manufacturers of such units will be appreciated. —*For the Commanding Officer . . . .*

Information supplied.—*Editor.*

Penetrating Wood Sealers

In the February 1952 issue of this magazine, we saw, in the "Letters from Readers" section, an inquiry on page 84 regarding penetrating wood sealers. We are also interested in obtaining penetrating sealers, with the easy sanding qualities, and would like to ask you if you would send us the names of some suppliers who carry this type of product.—*F. B. Co.*

In a letter we are submitting the names and addresses of several suppliers.—*Editor.*

Liquid Masking Material

One of the writer's customers is interested in obtaining a masking material that can be applied as a liquid to parts which are to be masked. The remainder of the apparatus is to be finished in a wrinkle enamel. They wish something that will withstand baking with a wrinkle finish and then can be peeled off so as to retain a bright surface.

The writer is sure there is such a product on the market but he does not know where to find it. Would greatly appreciate your giving us the names of products and sources of supply.—*K. Inc.*

For a sprayable (or brushable) peel-off type of masking coating that will stand baking, we suggest you try one or more of those firms that we are naming in a letter to you.—*Editor.*

Who Supplies "Vinicote?"

We are interested in learning the names and addresses of the producer of lacquer known as Vinicote W.V. —*W. Mfg. Co. (Collapsible Tubes).*

In our Trade-Mark Directory we find that "Vinicote" is a product of New England Collapsible Tube Co., New London, Conn.—*Editor.*

We Have Problems; Please Someone Help Us

We have gone into the study of the installation of a conveyor system in the paint shop. Since our problem is one of limited production such as, for instance, from 1500 pieces to 5000 pieces of any one part per year, complicated by the fact that there are approximately 300 different piece parts made of sheet steel, aluminum, brass or gray iron castings; small to large sizes, varying colors, and the best finish that is producible.

You can see that ours is more or less a custom shop on an elaborate scale. The finishing process we use includes Bonderite, wipe and blow off,

Thirty-five feet long, this Hercules trailer contains all the latest information on lacquer for formulators and users. In addition to exhibits, it is equipped with facilities for showing Hercules lacquer films, can be used as a conference room, and carries basic types of up-to-date spraying and lacquer heating equipment.

NEW TOURING EXHIBIT BRINGS LATEST IN LACQUER TO INDUSTRY'S DOOR

This 35-foot trailer—fitted out as a combined exhibit booth, application laboratory, conference room, and movie theater—is Hercules' way of bringing the latest in lacquer developments directly to industry for on-the-spot investigation and discussion.

The "Mobile Lacquer Information Center" will visit lacquer manufacturers throughout the United States. It may be scheduled for your locality. Contact your lacquer supplier for further information.

Test panels in the "Mobile Lacquer Information Center" are displayed for easy examination.

Cellulose Products Department
HERCULES POWDER COMPANY
928 Market Street, Wilmington 99, Delaware

A feature of the traveling exhibit is the various types of equipment used for heating and applying hot lacquer.

Interior, showing some of the test panels, samples of actual lacquer applications, available literature, and equipment.

spray primer, surfacer, putty (where necessary), sand and spray synthetic enamel.

We are seeking to contact companies that have had similar problems to ours, before making the huge investment required for completely conveyorizing this department, and would appreciate hearing from such companies.—*X. Co.*

Editor's Note: Any replies to this letter will be promptly forwarded to the concern—a very good company in the east.

Safety Cans for Naphtha

Can you gives us the names of manufacturers of safety cans for thinners, naphtha, and also to hold a 5-gallon pail of lacquer?

We have vaults for storage, but our problem is to have approved containers for lacquers that are kept by the spray booths, as the operator cannot waste the time to go to the vaults every time he must fill the bucket at the spray booth.

We use two kinds of lacquer and now have a 5-gallon pail of each by the spray booth and after the top is removed from the bucket it becomes a hazard which we can overcome by using a safety can that has a spring cover and will open so a 5-gallon pail of lacquer can be put in or removed.

Have been watching the ads in *Industrial Finishing*, but find none on containers.—*H.Co.*

Try one of the following: H. Behlen & Bro., 10 Christopher St., New York 14, N. Y., or Justrite Mfg. Co., 2051 N. Southport Ave., Chicago 14, Illinois.—*Editor.*

"Don't try to lie out of it, you worm! I found this slip with her name—you have a new girl at the shop named Polyethylene!"

Baked Finish; No Oven

In July 1952 issue an article under the above title appeared on page 115. We will appreciate it if you can give us the name of the firm to contact regarding this product and process.—*Pr. Mfg. Co.*

See Oct. 1952 issue, pages 98 to 100. Also April 1953 issue, page 36. —*Editor.*

Electric Conductive Paints

In the March '53 Letters from Readers, page 86, we notice some answers to a previous inquiry about Electric Conductive Paints.

We have been manufacturing conductive coatings for the television picture tube manufacturers in the east for the past five years.

We have recently brought out a new conductive coating that we feel is one of the latest developments in the conductive paint field, from the standpoint of ohms resistance, adhesion,

PERFECTION FURNITURE FINISHES

contain none of the conventional stearates or flattening agents but are flattened by synthesis giving a waxed effect and a hand rubbed appearance.

Outstanding advantages of PERFECTION FLAT FINISHES are . . . CLARITY OF GLOSS LACQUER EVEN IN LOWER SHEENS . . . SMOOTH . . . WON'T HAZE OR SWEAT BACK . . . WATER PROOF . . . LIQUOR PROOF . . . GRADES SUITED TO BUDGET AND DRYING TIME.

WRITE FOR SAMPLES

SEE THE DIFFERENCE
FEEL THE DIFFERENCE

Perfection PAINT & COLOR COMPANY
INDIANAPOLIS 2, INDIANA

humidity resistance, etc. If from the above you feel that W.E.Co. would be interested, we will appreciate the full name and address of this firm.—*The Vorac Co.*

In a letter we are telling you the Division of Westinghouse from which the inquiry came.

The original inquiry on this subject as published in January 1953 issue, has resulted in our receiving several letters from both prospective users and present suppliers of electric conductive paints.—*Editor.*

That "First" Spraying

In reply to, "Who Sprayed First", page 78 of the April issue of *Industrial Finishing*, I am not in position to say who sprayed first, but I can offer some interesting information.

One of the first spray guns was patented March 25, 1902, and was manufactured by the Eureka P. Dum....., (the balance of this last name has been worn off) Company.

It was first put to use by the Herzog Art Furniture Co. and the Saginaw Cabinet Co. of Saginaw, Michigan. I was taught to spray with this same gun in the year 1916. Also, this gun is in my possession and is still in good working condition. If a photo of this gun would be of any value to you I will take a Poloroid picture of it and mail to you upon request.—*G. W. Meade, Finishing Supt., The Kling Factories, Mayville, N. Y.*

A Heavy Spin-a-Brush?

We are trying to locate an electrical centrifugal tool used in the cleaning of paint brushes. For a number of years we have been using a tool known as "Spin-a-brush". This tool is satisfactory for a small number of painters, but it is not sturdy enough for large crews. If you know of any of your advertisers who are manufacturing a heavy duty type, we would appreciate your forwarding their names and addresses.—*M. B. Co.*

Who has a heavy electric or mechanical brush cleaner?—*Editor.*

Tumbling Equipment? We Make It

On going through March issue, we notice, on page 84, a concern in Grand Rapids is interested in tumbling barrels. We have the most unique and exclusive plant in the entire United States manufacturing tumbling barrels exclusively.

We have been in the business for over 40 years; have developed many processes which would be of great interest to your trade, and we believe

---

"OK, I'll hand over my copy of Industrial Finishing, but this is daylight robbery. Why don't you subscribe to your own copies."

where heat is a problem

united's hitemp

THE NEW ONE-COAT, HEAT-RESISTANT ENAMEL

Yes, even on the manifold of a motorcycle . . . and wherever high heat creates a finishing problem, you can look to United's **HITEMP**, the new one-coat, heat-resistant enamel, for a speedy solution.

HITEMP will give your products a tough, durable finish which will retain its color without cracking or peeling at temperatures up to 500 degrees F. Applied by spraying, **HITEMP** has excellent adhesion to all metals, including steel and aluminum.

HITEMP is available in all colors, in flats, semi-gloss, and gloss. Make your own tests with **HITEMP**—a working sample will be sent on request.

Complete Research Facilities

AT YOUR SERVICE

If you are faced with a special finishing problem, the United laboratory will gladly assist in finding a solution. These research facilities are always at your service to help make a better product.

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United LACQUER MFG. CORP.

LINDEN, N. J. PHILADELPHIA 19, PA.

that if you recommend, to some of your readers, the name of our firm as a source of supply for tumbling barrels, we can assure you that you are giving the name of a concern who is reliable and equipped to handle any kind of tumbling problem.

We have developed a special process for tumbling wood, for staining and polishing wood, all by tumbling, and have gotten up some very interesting literature. . . . *Lupoline Automatic Polishing Equipment Corp. (Address on request.)*

Zahn Viscosity Cups

I would like to get the manufacturer's name and address of Zahn viscosity cups, as mentioned on page 96 of March issue. Additional information and prices are desired.—*C.&S.*

Write either of the following: Henry A. Gardner Laboratory, 4723 Elm St., Bethesda 14, Md., or General Electric Co., Instrument & Meter Div'n., West Lynn, Mass.—*Editor.*

Zinc to Gold Color

We are interested in a method of finishing zinc die casting to simulate brass and gold plating, etc. The finish would be through a paint application. —*L.B.*

In a letter we are naming a few concerns who can supply finishing materials for this purpose.—*Editor.*

Touch-up Crayons

A few years ago we bought some touch-up crayons that came in a variety of mahogany, walnut and maple shades, and it was possible to coat work after their use and still obtain proper adhesion over it. Can you tell us where these crayons can be obtained?—*M. Furn. Co.*

Perhaps you have in mind Sca-Rid which "fixes and eliminates scars, scratches, gouges and abrasions on furniture . . . . " It is a product of H. Behlen & Bro., whose ad appears on page 123 of April issue.—*Editor.*

Sun Proof Finish Wanted

We would like to get in touch with a company that can supply a so-called sun-proof finish. It is necessary that the ultra-violet rays of the sun be reflected so that no damage is done to the *Waren in den Vitrinen Hervorruft.*

So far as we know this article is made in different colors and surely in bright yellow, bright blue and bright green, which we are looking for.

If you manufacture a sunproof lacquer or finish, would you please send us a sample? We would like to have samples of different colors.

Should you not manufacture this article, then would you please forward this letter or information to someone who does make this sun-proof lacquer, and we will be thankful to you. . . . *Jose R. Heymann K., Apartos de Fisica Y. Medicina, Caracas, Venezuela.*

Graining Rollers

One of our customers is looking for a source of supply for wood graining rollers. They intend to imitate mahogany grain on lacquered poplar. We will appreciate it if you can give us the name and address of a manufacturer of such graining rollers.—*D. Co.*

In a letter we are naming several suppliers of graining rollers.—*Editor.*

YOU ARE PAYING FOR A DeBURGH FINISHING SYSTEM . .

Why Not Own One?

SOME TYPICAL APPLICATIONS:

- Case Goods
- Dining Room Furniture
- Chests
- Dinettes
- TV and Radio Cabinets
- Sewing Machine Cabinets
- Tables and Chairs
- Caskets
- Wall Panels
- Pianos

Recognized leaders* in these typical fields are gaining these tremendous advantages from DeBURGH powered, timed Finishing Systems:

Savings up to 50% on labor . . . up to 35% on floor space. Improved finishes at lower cost. Increased production. Free engineering analysis, labor saving analysis, space saving analysis! Inquire!

*NAMES ON REQUEST

- **Cut Out Finishing Department "Bottlenecks"!**
- **Eliminate Indirect Labor!**
- **Reduce Process Inventory!**
- **Not A "Speed-Up"!**

"DESIGNED BY A FURNITURE MAN FOR FURNITURE MEN"

Investigate!

DeBURGH CONVEYORS, INC.

Patented and Patents Pending

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HOT SPRAY LACQUERS

It is well-known, now, in most of industry concerned with finishing, that HOT SPRAY LACQUER has some outstanding advantages.

It covers better, dries faster, and is better adapted to conveyor-system spraying. All these features mean *lower finishing costs.*

ROCKFORD VARNISH is a first-class source for all types of Hot Spray Lacquers. Our laboratory sets rigid standards for formulation, using only the best of materials, and accurately prescribing the mixture to perform as you wish under the conditions in your plant.

Thus, from Rockford Varnish, you can be assured of top quality to suit your requirements. Give us the word on what you need . . .

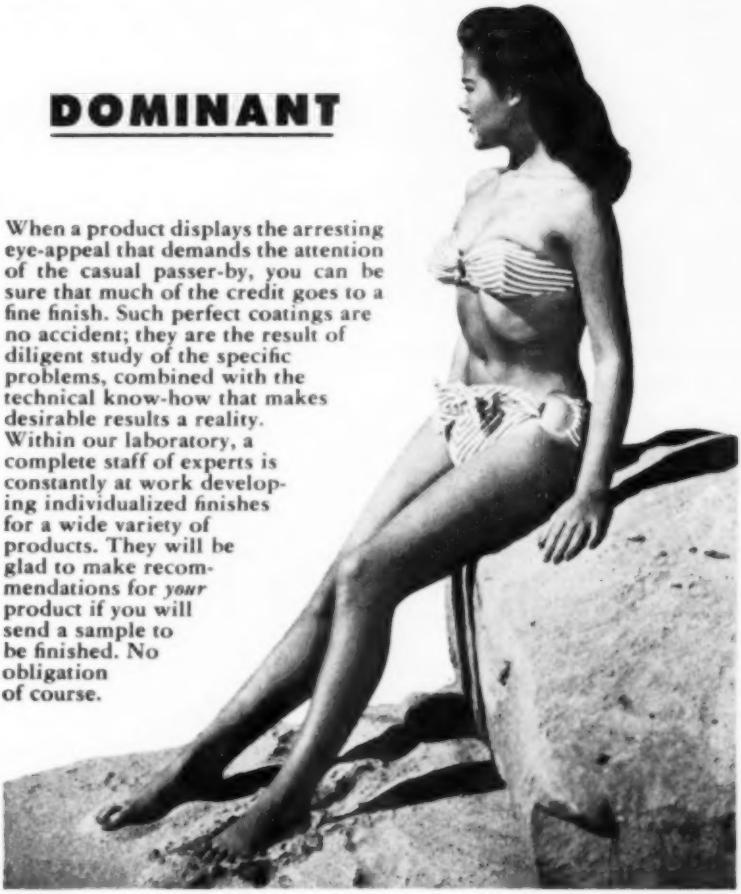
Research, Quality, Service

ROCKFORD VARNISH *Company*
ROCKFORD, ILLINOIS
Manufacturers of Protective and Decorative Coatings

Affiliate
GORDON BARTELS CO.
Roller Coating Specialists

DOMINANT

When a product displays the arresting eye-appeal that demands the attention of the casual passer-by, you can be sure that much of the credit goes to a fine finish. Such perfect coatings are no accident; they are the result of diligent study of the specific problems, combined with the technical know-how that makes desirable results a reality. Within our laboratory, a complete staff of experts is constantly at work developing individualized finishes for a wide variety of products. They will be glad to make recommendations for *your* product if you will send a sample to be finished. No obligation of course.



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Manufacturers of Protective and Decorative Coatings

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Roller Coating Specialists

Infrared Does Dry Finish on Wood Surfaces

In March issue, page 94, we read a request for information on the use of infrared equipment for drying finishes on furniture.

There are three plants at present working in this country (England) force-drying and stoving [baking] wood finishes, which have been manufactured and installed by the General Electric Co. of England. Two of these plants force-dry cellulose materials on radio cabinets and car fillets. Our plant has been used for the last four years for stoving SaR-ReZ Finishes on plywood, blockboard and solid wood in the production of SaR-ReZ Paneling.

SaR-ReZ Finishes are catalyst hardening synthetic resin materials manufactured by ourselves. The [oven] is composed of three horizontal 6x6-ft. banks of lamps arranged over a hozizontal wire mesh conveyor. Each coat of finish, whether it is pigmented or clear, applied to decoratively veneered plywood, is stoved [baked] in six minutes and is ready for sanding or further coats after 20 minutes cooling.

Many successful demonstrations have been given on the use of infrared for force-drying finishes on built-up furniture, but to date there are no plants working under production conditions. Very big savings in time have been shown (for example four hours from the white wood stage to despatch, where 90 hours are normally needed.)

The blistering that is likely to occur by the unskilled use of infrared equipment is probably due to the evaporation of solvents trapped in grain lines or in the filler, and not to moisture or air in escaping from the wood. The gas laws prove that to produce a blister due to expanding air from a temperature of 0° to 100° C. [32° F. to 212° F.] there must be a reservoir three times as big as the blister in the wood itself. This is highly improbable, as large blisters are easily obtainable on decoratively veneered plywood where there is an unbroken glue line only a few thousandths of an inch below the surface.

The blisters must therefore be due to a change of state (liquid to gas.) Many tests have been carried out to determine whether moisture or solvents cause blistering, and the results tend to favor the solvent theory.

We are sending you pictures showing the layout of our prototype plant, which is now undergoing reorganization with the incorporation of automatic spraying, air-conditioning, loading and unloading equipment.—*Saro Laminated Wood Products Ltd., E. L. Williams, Technical Service Dept.*

Cabinet Designers, Inc., well known Los Angeles furniture manufacturers, now dry their wood pieces of furniture, after being coated with lacquer, with C. M. infrared tubes.

The oven is simply constructed with galvanized sheet steel sides; both ends are completely open. The furniture is passed through on pallets, wheeled bottoms guided along a channel steel track. The oven is 16-ft. long by 7-ft. wide. The pallet travels along the track which is elevated about 2-ft.

new

National Air Sander

STRAIGHT-LINE ACTION...SINGLE PAD

FAST • LIGHTWEIGHT • VIBRATIONLESS

MODEL 600

$82.50

Here is National's new, powerful, high-production sander which weighs only 5 pounds but operates at 3200 rpm. Rapid stock removal is assured by the 5/16" stroke and 25 sq. in. of abrasive area. Either felt or rubber backing pads are available, and a built-in water spray makes wet sanding easy. National manufactures a complete line of block sanders, offering either orbital or straight line action . . . electric or air driven.

Write for further information today!

NATIONAL NS SANDERS

NATIONAL AIR SANDER, INC.

2820 AUBURN ST. ROCKFORD, ILLINOIS

from the floor. The oven height is 8-ft. This type of oven has the C. M. infrared "Pyrex" tube heaters located along the top of the oven, forming two rows.

Each heater measures 4-ft. long by 5¼-in wide, and are placed four heaters to the row. The heaters operate about 18-in. above the surface to be dried. The largest piece of furniture is considered and the oven is designed accordingly. On entering the oven the furniture passes under two heaters rated at 500-watts each; the other heaters are rated at 750-watts each. The total power is rated at approximately 6-kw. Oven temperature is 115° F. [A small illustration of one of these heater tubes and its reflector, with a brief description of same, appears in March issue, page 112.]

This oven is located at the final stage of the line, which is the third lacquer coating; and it requires only a 10-minute drying cycle with the infrared oven. All other stations are being run through infrared to speed up drying, as soon as construction is completed. Station No. 1 (filler coat), under infrared now, only requires a 30-minute cycle. Station No. 2 (sealer), No. 3 (shading) and No. 4 (1st lacquer coat) undergoing change-over to infrared tube ovens.—*Corona Mfg. Corporation.*

To Remove Walnut Color

Can you recommend either products, or manufacturers of a product, suitable for stripping gum wood which has been stained dark walnut?—*L.W.*

Does the gum wood have a coating of lacquer, varnish or synthetic finish in addition to the stain? If so, one of the several commercial paint removers should be used first. In a letter we are giving you names and addresses of several manufacturers of paint removers.

Now, if or when you are down to the stain and want to remove walnut stain from the gum wood, you will have to resort to bleaching.

Follow the directions given by a reputable manufacturer or supplier of bleaching material. If one bleaching operation doesn't do the job you may have to make two operations of it or use a stronger bleaching solution.

In a letter we are giving you names and addresses of suppliers of bleaching materials.—*Editor.*

Bleaching Raises Grain

A few days ago I was bleaching some mahogany TV cabinets, and I noticed the grain raised to such an extent that I had to sand them by machine.

I am wondering if this condition could be caused by excess moisture in the mahogany before bleaching? Also, would it help any if the cabinets were glue-sized before sanding? I have never seen the grain raise this much before.—*G.M.*

It is not unusual for the grain of wood to raise some after a bleaching operation. If, before bleaching, you will sponge the wood surface with warm water, then allow it to dry for an hour or so and sand, you will find that after bleaching the extent of grain raising will be reduced. It is not advisable to apply a glue size before bleaching.

If you are using a caustic and hydrogen peroxide bleach, be sure to allow sufficient time for air drying before proceeding with the next finishing operation. This time should be as much as 48 to 72 hours, unless you have an oven or heated room *with ventilation* where a heat of about 100° F. can be maintained. In this case 12

Rollacoat for economy
GET FINER—FASTER FINISHING!

The benefits to be gained by using the Rollacoat method of applying finishes and protective coatings, to practically any type of flat materials, are three-fold. In the first place coating speeds are greatly increased over those of any other method and are governed largely by how fast the coated materials can be handled or dried. Secondly, the coverage per sq. ft. per gallon is usually at least 50% greater, the only loss being the paint removed from the rolls at the end of a run. In the third place you obtain finer quality of finish due to accurate control of thickness and eveness of coat.

The applications of Rollacoating are numerous. Top, bottom and sides of practically any type of flat material, whether sheet or coil stock, can be coated by a single pass through the machine.

Special equipment for cleaning, treating, coating, drying, and rewinding strip in continuous process can be constructed to special order.

GASWAY CORPORATION

Write or wire today for the 12 page Gasway illustrated book describing Rollacoat Finishers, their possibilities and limitation.

6463 N. Ravenswood Ave.
Chicago 26, Illinois

hours of force drying may be sufficient. This much time is required to remove entrapped gas from the pores of the wood.—*C.B.*

Buttons; Hardening Plus Color Coats

At the present time we are interested in improving the finishing process on our wire-shank tufting buttons. For several years we have finished these in essentially the same way but we believe there is someone in the industry who could help us improve our present method, or suggest a different way of finishing these tufting buttons.

Our present method is to soak the tufting buttons for eight hours in a hardening solution, spin and extract to eliminate the surface hardening varnish, then spread on pans and place in a steam heated oven to cure.

We apply the color to these buttons by tumbling them in an octagonal open barrel; then we again spread them on shallow pans and place them in a steam heated oven to cure. The average number of coats necessary to complete our product is one hardening coat and five color coats.

This is a very sketchy outline of the method we use. However if you could recommend someone to help us, we would furnish them with a much more detailed description of our process.—*T.Co. (Fiber Products).*

You might take your choice of one of three courses of action: Submit samples of buttons, before and after finishing to a manufacturer of centrifugal machines used for impregnating and coating small parts and products. His technical men or engineers have the practical training and experience to tackle problems of this kind, as a service to present and prospective customers, and they may come up with recommendations that will meet with your approval.

An alternate course would be to submit your samples to an independent research organization or laboratory that makes a specialty of working out improved methods, processes and products for industrial firms. Their fees would probably be higher, as they have no machines, equipment or materials to sell—just research, knowledge, thinking, etc.

A third course would be to hire an independent industrial engineer for a stated period of time—or for just long enough to work on this one problem.

Perhaps some of our readers may see this and become interested. Any letters we receive will be forwarded to you.—*Editor.*

Making Glue Size

Mr. Charles Geralde, Manager of Quality Control, Smith Cabinet Mfg. Co., Salem, Ind.: We noticed with interest an illustrated feature article about your operations in March 1953 issue of *Industrial Finishing* by P. C. Bardin, on "Mass Production Finishing of Television Cabinets," beginning on page 52.

Might we suggest that, in the preparation of your glue-size, you try the following formula:

Four parts of water.
Four parts of Glue-Life No. 24.
One part of animal glue jelly.

Not only will you obtain an alkaline glue-size, which you desire, but you will also have the following:

1) A more rapid penetration of the glue-size. To prove this feature, drop simultaneously upon a piece of veneer, a drop of Glue-Life No. 24 and a drop of water, and note the rapid penetration of the former into the pores.

2) An even spread of the size, due to its rapid penetration; the size is

QUALATONE PRODUCTS INCORPORATED
21 GAY STREET, NEW YORK 14, N. Y.
West Coast Distributor: H. Behlen & Bro., Inc., 1755 Berkeley St., Santa Monica, Calif.

FUNCTIONAL FINISHES ! !

If you require your coatings to accomplish some specific task—something beyond mere ornamental appearance or average longevity—

TRY US!

We make ACRYLIC, ALKYD, CELLULOSIC and VINYLOID coatings for a very wide range of specialized industrial applications.

THE VARNISH PRODUCTS COMPANY
5206 Harvard Avenue **Cleveland, Ohio**

carried into the open pores of the wood.

3) Glue-Life No. 24 contains a mixture of chemical compounds compatible to wood and glue, and its solids content builds up the glue-size and helps fill the open pores.

4) Relative freedom from pinholing of the finish, especially in large-pore woods, and good hold-out with a minimum of finishing operations.—*Liquafill Mfg. Company.*

How to Solve Problems

YOU WOULDN'T think of trying to handle production without a definite program to guide the finishing department. Are you using the same logic in finding solutions to troublesome problems? The following suggestions, applied promptly and methodically, will often bring the answers you seek. Even if you secure a partial solution before completing the list, going through to the end may add further improvements and increased efficiency.

1) Call a department conference. Encourage everyone to suggest ideas based on that part of the work which he knows best.

2) Consult all present suppliers of materials, equipment or supplies who are or should be interested. Outline your problem in the greatest possible detail, and in writing. Allow suppliers time to do some research on it if necessary.

3) Refer to your back file of *Industrial Finishing* to see whether certain phases of your problem have received attention there.

4) Read carefully the advertisements in the latest issues of

MODEL DF ELECTRIC

MODEL AF AIR

A DECADE OF **Easys** - and now a **New 4 lb. Easy** with Easy's famous back-and-forth action that **does the complete finishing job** - NO HAND CLEAN UP. Sanding, rubbing or polishing wood, metal, plastics - all material - and surfaces CURVED or flat, WET or dry. Five times faster than hand work and **easy on the workman.** Won't leave swirls, curlicues or other hard to cover abrasive scratches.

Ask your jobber or write for new catalog sheet.

DSM DETROIT SURFACING MACHINE COMPANY
1268 East Eight Mile Road, Detroit 20, Michigan

this magazine. A supplier whose services you have not previously used may be offering help on the very problem that is bothering your finishing department.

5) Invite other finishers—perhaps in distant territories or non-competitive lines—to exchange ideas with you. A hint from here and there may speed up the final solution.

6) Experiment a bit in your own finishing department. Lift your thinking out of the rut; this may be a good start toward success.—*G.M.D.*

L. F. Luckenbill Joins Union Tool Corp.

Union Tool Corp., Warsaw, Indiana, announces appointment of Lewis F. Luckenbill as sales representative for Michigan, Wisconsin, Illinois, Minnesota, Missouri and western Indiana The company manufactures roller coating machines.

Hercules Establishes New Laboratory

The establishment of a new sales-service laboratory, to provide additional technical assistance to the protective coatings industry, is announced by Hercules Powder Company's Cellulose Products Department.

The new laboratory is located at the company's Experiment Station, Wilmington, Delaware. Hercules can now expand its present facilities for providing direct technical service to customers on both manufacture and use of protective coatings based on nitrocellulose, ethyl cellulose, cellulose acetate and chlorinated rubber.

In addition to providing technical assistance in the laboratory, Hercules representatives will be available to visit individual plants.

The laboratory will be under the direction of James R. Yeager, manager market development coatings, Cellulose Products Department. Rufus F. Wint will act as coordinator and Gregory N. Bruxelles as supervisor of the laboratory.

? ? PATCHING PROBLEMS ? ?

Let us assist you

We have a complete line of modern patching materials and the various latest procedures to fit into your production schedule.

Our materials are now in use in production lines making Furniture, T V Cabinets, Novelties and Pianos.

Our Nu Glo Stick will not raise and you can do final patching on Sealer Coats.

We also have available men to train your personnel at a small fee. Write for particulars.

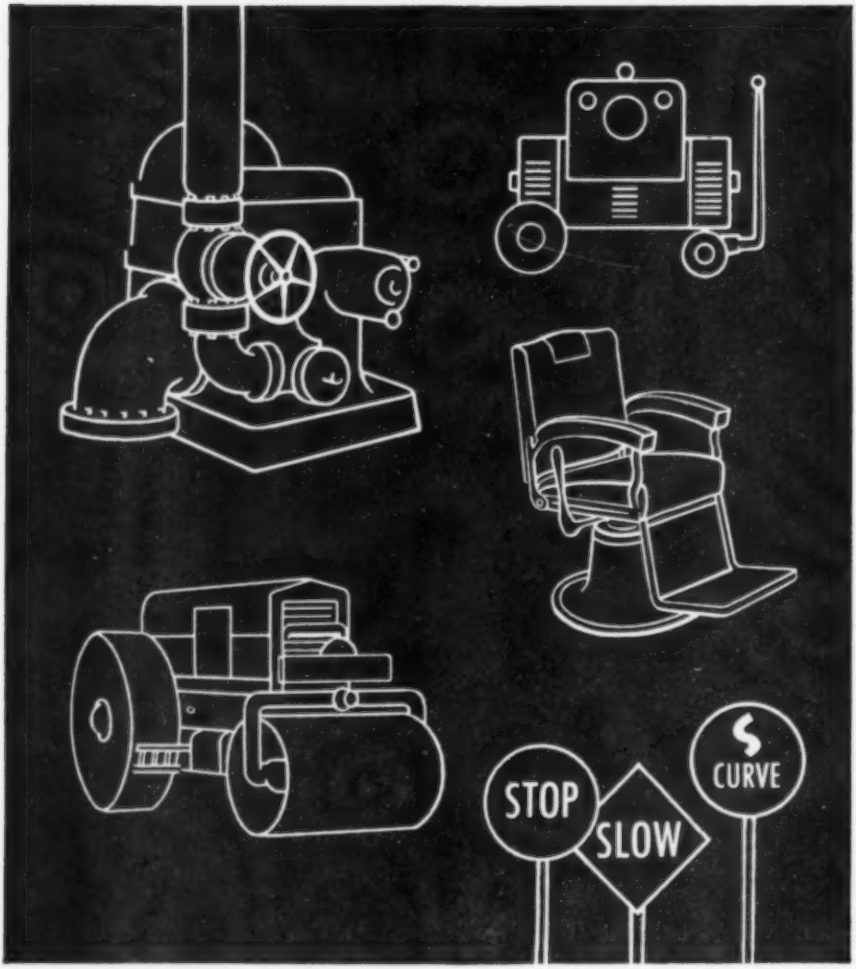
STAR CHEMICAL CO., INC.

Everything in Wood Finishes
SINCE 1916
Main Office
4500 W. Cermak Rd.
CHICAGO 23, ILL.
Southwest Branch
2619 S. Ervay St. DALLAS 15, TEXAS

I NEVER DRY OUT OR HARDEN!
Improved
DETROIT
HANDY "TAC" RAG
NON INFLAMMABLE
The best way to remove all dust, lint and sand particles before painting. Detroit Handy "Tac" Rags are ready for instant use. Never harden or dry out. Save labor and materials. Improve the finish. Eliminate costly rejects.
Recommended by your trade everywhere!

Standard of the FINISHING INDUSTRY *Since 1934*
DETRO MFG. & SALES CO., CULVER CITY, CALIFORNIA

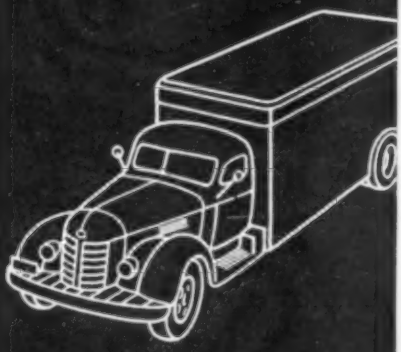
Lowe Brothers ZINOXIDE cuts spray booth



* ZINOXIDE is the ideal time-saving, money-saving primer for a wide variety of products—turbines, barber chairs, road rollers, welding equipment and road signs, to mention just a few. It adheres perfectly to all types of metal — even aluminum!

Primer handling time in half!

produces a better looking job— practically eliminates sanding



An Extra ZINOXIDE PLUS! Contains 2 of the best corrosion resisting pigments known to the paint industry! Products primed with ZINOXIDE can be stored outside without danger of rusting!

A midwestern truck body manufacturer* had heard about ZINOXIDE Primer—was intrigued—but wanted to see the *proof* in his own plant. A Lowe Brothers "Finishing Specialist" demonstrated its amazing qualities of adhesion and durability with impact and conical mandrel tests on a ZINOXIDE primed panel. Then, he put ZINOXIDE to the test on one of the large, hard-to-prime truck bodies—and here's what the manufacturer saw:

1. **ZINOXIDE flowed out smoothly** — NO OVERSPRAY, even where it was necessary to double back on corners.
2. **Dried in minutes**—smooth as velvet!
3. **Required no sanding** — except for minor touch-up where dirt was on the surface.
4. **Ready for finish coat immediately**—no time and effort spent pulling body out of booth to dry!
5. **Smooth, beautiful gloss,** without "orange peel," was secured in finish coat — proving ZINOXIDE'S excellent "hold out" qualities!

Now, Lowe Brothers ZINOXIDE is at work in this plant everyday—producing better looking results —saving time and money, too, by greatly reducing sanding and handling costs. You'll find that it will be worth your time to check into the possibilities of using ZINOXIDE. Write today for details —no obligation.

THE LOWE BROTHERS COMPANY • Dayton 2, Ohio
Industrial Division

This advertisement is based on facts from Lowe Brothers industrial case history files.

LEADERSHIP THROUGH CONSISTENT SERVICE

Lowe Brothers
FINISHES FOR INDUSTRY

Automatic Rotary-Indexing Painting Machine

A new-type, automatic, rotary-indexing painting machine has just been developed by the Conforming Matrix Corp. It may be completely air-operated or, if required, actuated by electric-motor Geneva drive.

The particular machine illustrated has 24 work-holders and indexes 12 times per each complete revolution of the table, painting the inside of rocket heads two at a time. The part cavity is 8-in. deep; painting is accomplished on the return stroke, with the work being revolved by a variable-speed air drive. The speed of the stroke during painting can be regulated by a convenient dial, and the speed of indexing can be controlled similarly by another dial to paint from 400 to 1200 pieces per hour, two at a time. The machine operates in conjunction with a continuous, circulating paint system, and if required can be supplied with hot-spray equipment.

Here it paints the insides of rocket heads.

This new machine can also be built for 4-, 6-, 8-, 12- or 24-station indexes, or for continuous movement.

Literature on automatic spray-painting machines, tools, clamps, fixtures, masks and mask-washers will be sent free to anyone addressing his request to Conforming Matrix Corp., 331 Factories Bldg., Toledo 2, Ohio.

New Paint Strippers—One Thin and One Thick

Oakite Products, Inc., manufacturer of industrial cleaning and allied materials, 132 F Rector St., New York 6, N. Y., announces the development of two new paint strippers, Oakite Composition No. 56 and Oakite Composition No. 57, designed respectively for tank immersion stripping and brush-on stripping of a wide variety of alkaline-resistant paints and lacquers.

Oakite Composition No. 56 is a thin-bodied solvent, neutral in character. It is non-flammable, and contains no phenols, cresols, acids or alkalies. Designed for immersion stripping of urea-formaldehyde, alkyd, phenolic and urea-melamine finishes, lacquers, varnishes, wrinkle finishes and vinylite resins, this material is used at full strength and unheated, with parts to be stripped immersed for periods of time which will vary depending on the type of paint, number of coats,

Conveyor Line Finishing

Factory Trained Technical Men

Since the inception of mechanized finishing operations, our laboratory and research staff has worked constantly to develop and formulate C.L.F.* finishes to meet the exacting requirements of Conveyor Line Finishing schedules. This background of experience, factory training and practical application have made our technical men experts on C.L.F. operations.

A great deal of time can be saved, general operations improved and rejects eliminated by knowing where to look and what to do. Our technical men are trained and qualified to ferret out the cause of any difficulty and to find the right solution.

If you are planning a new C.L.F. set-up, or if you are planning to convert your finishing production to C.L.F., our technical men have the "know how" to set up your schedule of operations and to recommend the materials to be used. They are at your service, without obligation. A phone call, wire or letter will give you the details of the recommended procedure to work out and solve your particular problems.

*Conveyor line finishing.

OUR 78TH YEAR OF SERVICE

The Lawrence-McFadden Co.

Headquarters for Fine Finishes Since 1875

Manufacturers of

FILLERS—STAINS—VARNISHES—LACQUERS—SEALERS—PRIMERS AND SPECIAL FINISHES FOR CONVEYOR LINE PRODUCTION

7430 STATE ROAD PHILADELPHIA 36, PA.

REPRINTS AVAILABLE

"How Much is A Gallon of Paint Worth," price 10 cents per copy.

"Technique of Finishing Small Wood Turnings, etc., by Tumbling," price 10 cents per copy.

"Why Color Changes in Finished Furniture," price 10 cents per copy.

"The Theory and Practice of Finishing Furniture" (Five Parts), price 20 cents per copy.

"Coating the Surfaces of Products by Dipping," price 10 cents per copy.

"A Method Engineer Analyzes Paint Selling," price 10 cents per copy.

INDUSTRIAL FINISHING Magazine

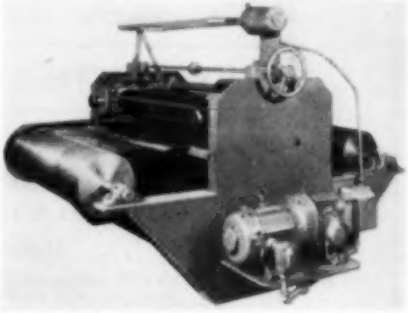
1142 N. Meridian, Indianapolis 4, Ind.

age, etc. Some finishes will wrinkle and rinse off in sheets with a pressure rinse after application of Oakite Composition No. 56; others will soften to the point where they can be scraped or brushed off.

The Oakite Composition No. 57, is a viscous solvent intended to replace combinations of non-viscous solvent detergents and thickeners when stripping finishes from vertical and inverted surfaces. It is non-flammable and contains no phenols, cresols, acids or alkalies. It can be applied safely on all metals at full strength by brush-on method, and is allowed to soak on surfaces until paint wrinkles or softens. Paint is then hosed or scraped off. Many penolics, alkyds, ureas, vinyls, varnishes and lacquers are easily removed by one application of this material. Some other finishes may require more than one application.

Roller Coater Applies Wax To Cylinder Gaskets

The Union Tool Corp., Warsaw, Ind., has developed a spreader for applying protective wax coatings to cylinder gaskets. Both sides are coated simultaneously. The coating rolls are felt covered; the doctor roll is neoprene covered.



Work rides through on piano wire conveyor and is coated on both sides.

NON-INJURIOUS ELECTRO NON-INFLAMMABLE

COLD STRIPPER

FASTEST *in Action* LOWEST *in Price*

WRITE FOR TESTING SAMPLE OR ORDER
5-GALLONS AT DRUM PRICE

Specify whether dip or brush type is desired

Allied Finishing Specialties Co.

2641 W. Grand Ave. • Chicago 12, Illinois

Gaskets are fed into the coating rolls by means of piano-wire conveyor which offers a minimum of contact area. The unit is provided with safety reversing switch and explosion proof controls.

Adhesion to Metal; Flexibility; Durability; Bake Finish

The search for new methods of producing more durable, resistant finishes to meet increasingly exacting requirements has led to large scale use of synthetic resins by the surface coatings industry. The Watson-Standard Co.'s diligent search for improved finishes has led to the development of a new series of gold lacquers based on Epoxy resin esters.

The result is a series of coatings that offer the distinct properties of resistance to chemicals, abrasion and tumbling. These coatings possess remarkable adhesion to metals, plus flexibility and toughness which make them superior fabricating coatings. They are baking types of finishes that will withstand relatively high temperatures without discoloration. Both baking periods and temperatures are flexible.

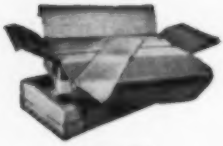
This new series of coatings include both the Epoxy Resin solution and Epoxy Ester types. The use of this resin by the coatings industry is relatively new; however, field tests have proved it to have outstanding characteristics which offer a new tool to the metal decorator.

The excellent adhesion of these coatings has been proved in beer can primers, crown gold lacquers, closure coatings, can liners and pail and drum linings.

For further information and samples, contact the Watson-Standard Co., 225 Galveston Ave., Pittsburgh 12, Pennsylvania.

For Dust Free Finishes!
BOND TACK CLOTH

IN ROLLS
Cut off any size piece to use as needed.



IN BULK
Cut and folded. Ready to use.

STAYS SOFT AND TACKY
A SPECK-FREE FINISH EVERYTIME

Now Available in Rolls or Cut Bulk—White or Gold. In Three Different Types of Cloth

Get your Tack Cloth packed just the way it's easiest for you to use . . . either in 150 yard rolls of 36" wide cloth or in handy cartons . . . 100 or more Tack Cloths to the carton.

No matter which way you buy it, you can be sure that every square inch will stay SOFT and TACKY until the very last bit is used up!

The Cut Bulk size is 18" x 36" . . . folded to 4½" x 18" for ease of handling. ALL BOND TACK CLOTH is **Spontaneous Combustion Proof, Lint-Free** and **Wax-Free.** Gives a sparkling speck-free Finish **every time.** Clean and sanitary. No waste.

TRY THEM and COMPARE RESULTS.
Samples Gladly Sent Upon Request.

BOND CHEMICAL PRODUCTS CO.
"The Tacky Wiper Specialists"
2641 N. CLYBOURN AVE. CHICAGO 14, ILLINOIS

Also Individually Packed in Glassine Envelopes—144 to the Carton

A Warranty of Satisfaction in Every Carton

Fast Dry Wood Filler

A new, fast drying wood filler that can be recoated in 30 minutes is announced by Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Illinois.

Named "Speedyfill," this new filler is claimed to be as high in quality as the conventional overnight drying types. Because Speedyfill dries like lacquer and can be recoated in 30 minutes after applying in normal air dry conditions, finishing room travel time can be speeded up as much as 24 hours—thus increasing production while reducing the work in progress inventory.

The new material is a high quality filler that passes all conventional laboratory tests for fillers. It has equal filling properties to conventional types; is more flexible cold tests show, and there is no spewing or shrinkage. By doing away with the long dry requirements of old style fillers, Speedyfill removes the last obstacle in the finishing industry to a complete quality finishing cycle in one working day. It is regularly available in white, natural, red mahogany, brown mahogany and walnut, but can be supplied to match any color.

Non-Combustible Solvents

Cineclene, M-5, Oxylene, M-6 and Furfasol, M-17 solvents comprise a group of non-combustible solvent products now offered by John B. Moore Corp., P. O. Box 3, Nutley 10, N. J., which may be used to replace carbon tetrachloride in specialized fields of cleaning.

These solvents have a comparatively low toxicity and high product efficiency. All three are close to carbon tetrachloride in speed of evaporation. None contain petroleum hydrocarbons.

Baronet Barrel Degreaser

For cleaning small metal parts quickly and effectively Baron Industries of California, 241 West Ave. 26, Los Angeles 31, Calif., has developed what is called the Baronet barrel degreaser.

Small, portable, safe, fast and economical.

Just as in large industrial machines, rapid parts cleaning is accomplished with non-inflammable trichlorethylene vapors.

The oil or smudged parts are lowered into the vapor zone. Cleaning is automatic and the work is warm and dry ready for use. The parts are never placed in dirty solvent—just pure vapors—so that results are always the same regardless of previous use.

The Baronet can be installed wherever electric service is available; just plug in and start cleaning. Since no water connections are needed the degreaser is easily moved from one location to another.

Included in this equipment are the following: A 2-kw. electric heating

AGATEEN

TO ALL OUR FRIENDS IN THE A. E. S.:

You are cordially invited to visit our Hospitality Headquarters at the Benjamin Franklin Hotel in Philadelphia during the Annual Convention of the American Electroplaters Society.

Will greet you there in person.

—BILL CHACE

Agate Lacquer Mfg. Co., Inc.
Serving Industry Since 1927
11-13 43rd Road
Long Island City, N. Y.
Stillwell 4-0660-1

AGATEEN
THE LAST WORD IN QUALITY

CONTROL PAINT OVERSPRAY
. . . *in a big way!*

Photo Courtesy of Consolidated Freightways.

This user utilized R P Paint Arrestors to provide effective control of large volume overspray . . . at low cost! This new, better method is inexpensive to install and maintain, saving floor space and flexible in application. Write for free booklet with helpful overspray removal suggestions . . . the R P way.

RP . . . PRODUCTS OF RESEARCH

RESEARCH PRODUCTS CORP.
Dept. 34 Madison 10, Wis.

BOOKS
On Finishing Available

"MODERN ORGANIC FINISHES—Their Application to Industrial Products" (452 pages) new $8.50

"CHEMICAL FORMULARY" (Vol. IX) 7.50
(Preceding Volumes also available, same price)

"FINISHING METAL PRODUCTS"—2nd edition (352 pages) 6.00

"PRACTICAL FURNITURE FINISHING" (112 pages) 1.75

"FURNITURE FINISHING" (543 pages) 5.00

"SPRAY PAINTING"—Industrial and Commercial (169 pages) 2.50

"THE MIXING OF COLORS AND PAINTS" (292 pages) 3.00

"WOOD FINISHING" (361 pages) 3.00

"NATIONAL PAINT DICTIONARY" (704 pages) 10.00

"MODERN POLISHES AND SPECIALTIES" (313 pages) 7.50

"PRACTICAL COLOR SIMPLIFIED" (128 pages) 6.00

"GRAINING"—Ancient and Modern (224 pages) 5.00

"THE SILK SCREEN PRINTING PROCESS" (225 pages) 5.00

"SCREEN PROCESS METHODS OF REPRODUCTION" (252 pages) 4.00

"THE SCIENCE OF WRINKLE FINISHING" (204 pages) 5.00

"THE SCIENCE OF MODERN WOOD FINISHING" (386 pages) 6.00

"PAINT & VARNISH TECHNOLOGY" (503 pages) 8.00

"METALLIC AND NON-METALLIC COATINGS FOR GRAY IRON" (76 pages) 1.75

"PAINT FILM DEFECTS — Their Causes and Cure" (544 pages) 12.00

"INDUSTRIAL SOLVENTS" (764 pages) 12.00

"FINISHING MATERIALS AND METHODS" (320 pages) 4.00

Cash Must Accompany Order—Send for Descriptive Circular

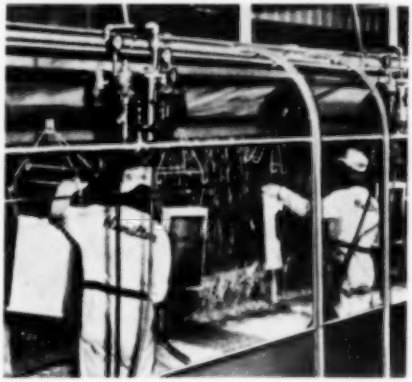
INDUSTRIAL FINISHING
1142 N. Meridian St. Indianapolis 4, Ind.

unit, condensing chamber, barrel, cover, thermostat and 15-ft. of cord, and switch as illustrated.

A standard 50-gallon steel drum is the work chamber. Only five gallons of solvent are required for operation.

New Water Wash Compound

Klem Chemicals, Inc., 14401 Lanson Ave., Dearborn, Mich., announces a line of water wash compounds which make the reclaiming of paint from spray booths more practical and economical.



Helps to reclaim paint from water-wash spray booths. Photo R. C. Mahon Co.

Featured in this line is the new Klem Water Wash Compound No. 203, compounded to eliminate nightly draining of tanks. Tests show that it may be used up to seven days before draining is required. Circulation lines, water pumps, flow control nozzles and baffles are reported to be free of paint sludge at the end of this period in production tests.

Trained Klem engineers in the field are available to inspect spray operations and make recommendations or, if preferred, you may write Klem Chemicals, Inc., for information.

No. 150
SpeedWay Speed Sander
Sands, Rubs, Polishes
. . . FOR DRY OR WET FINISHING
Motor-Driven
3/16" Orbital-Motion

Powerful, direct-connected (no gears), 3450 r.p.m., 100-120 v AC air-cooled motor. All sealed ball-bearing construction. Die-cast aluminum housing, polished. All-position handles. In hand weight only 5 lbs. Insulated with ground wire for wet as well as dry sanding or rubbing. Available accessories—deep contour pads, surface plates, felts, etc. Takes any sheet abrasives—3 covers 4½" x 6½" from standard 9" x 11" sheet.

A time saving quality tool priced so every worker can have one.

$34.50

Write for Circular

SpeedWay MANUFACTURING CO.
1886 So. 52nd Ave., Cicero 50, Ill.

"Glorod" Immersion Heater For Alkaline Solutions

A new type of heavy duty steel sheathed immersion heater for alkaline bath heating is announced by the Cleveland Process Co., 7016 Euclid Ave., Cleveland 3, Ohio. Low heat density protects both heater and liquids from damage due to carbonization or "frying."

A sealed, vapor-proof Underwriter's Approved junction box prevents entrance of liquids and vapors. When controlled by a thermostat, these units are in operation only for the period of time required to maintain the desired bath temperature.

Units are portable; a single unit can serve many tanks and be quickly mounted over the side of the tank, or as in the case of vapor degreasers, screwed into 2-in. threaded holes in the bottom of tanks.

This new heater has proved successful in high alkaline solutions and copper cyanide plating baths. The new heater can also be used in all vapor degreasers and for heating alkaline plating baths such as brass, bronze, cadmium, gold and silver.

Strippable Plastic Coating For Effective Masking

Spraylat "A", described and illustrated in a new bulletin, is a viscous water-base (or water dispersion) compound which, when sprayed upon plastic areas, forms a tough elastic, clear film capable of withstanding abuse in normal operations. It has been used successfully for many years for the protection of canopies for aircraft and clear plastic glass such as is used in television screens, refrigerator parts, etc.

Spraylat "A" provides both an excellent masking material and a tem-

porary protective coating in manufacturing processes.

Because of the firmness and toughness of the film, once it has been sprayed on, full protection against scratches, dirt, grease and handling in shipping is assured. After installation of a formed plastic sign, for example, the coating is easily "peeled off", revealing the sign in its original "factory fresh" appearance.

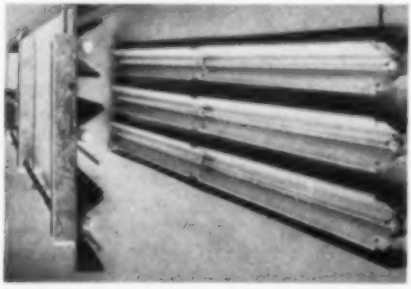
As a masking technique, after the film has been sprayed on and allowed to dry, the outline of the letters are simply scored with a knife and easily stripped off. The various colored lacquers can then be sprayed over the sign, as the film protects the rest of the sign from overspray.

A new illustrated bulletin, giving more information about this product, can be obtained free by writing to Spraylat Corp., One Park Ave., New York 16, N. Y.

Radiant Heat From Tubes In Front of Reflectors

For various heating, drying and baking operations, Corona Mfg. Corp., 5210 San Fernando Rd., Glendale 3, Calif., has developed the Merco infrared Pyrex tube. These tube sections, backed with reflectors, are available in sizes 2 to 8-ft. long by 12-in. to 30-in. wide.

The tube is designed to resist thermal and mechanical shock, and gives no hot spots. Because it contains no gas and operates at atmospheric pressure, it cannot explode, thus reducing fire hazard. The tube emits only a faint glow when in operation. This is an important feature in applications involving colors which are sensitive to light and tend to fade.



Various size sections of these electric heat units are available.

Dulite Chemical Black for Iron and Steel

A new ferrous metal iron and steel blackening compound, known as Dulite 3-0 Black, has been introduced by the Du-Lite Chemical Corp., Middletown, Conn.

Particularly effective for stainless steels, this compound will produce a non-fading black finish quickly and easily on malleable iron, etc., as well without need for special equipment.

The operating temperatures required for processing with Dulite 3-0 are exceptionally low, the maximum involved being 240° F. The compound is supplied in dry salts form which may be mixed as needed, eliminating the inconvenience and danger of carboys and liquid chemicals.

New Lacquer for Decorating Products Made of Plastics

A new lacquer for coating or decorating vinyls and plastisols is now being introduced to the plastics industry by Schwartz Chemical Co., Inc., 326 W. 70th St., New York 23, N. Y.

The non-toxic, washable coating was developed at the request of manufacturers of vinyl toys and dolls' heads.

High gloss and excellent adhesion are features of the fast-drying lacquer. Called Vinaplas-Lac, it air-drys in five minutes and leaves a flexible, scratch-proof coating. Vinaplas-Lac is available in a wide range of colors packed in one and five gallon cans and 55-gallon steel drums.

SPRAYON "PUSH-BUTTON" TOUCH UP

touch up your products anytime, anywhere... factory-perfect job every time!

YOUR OWN FINISH FROM YOUR OWN SOURCE

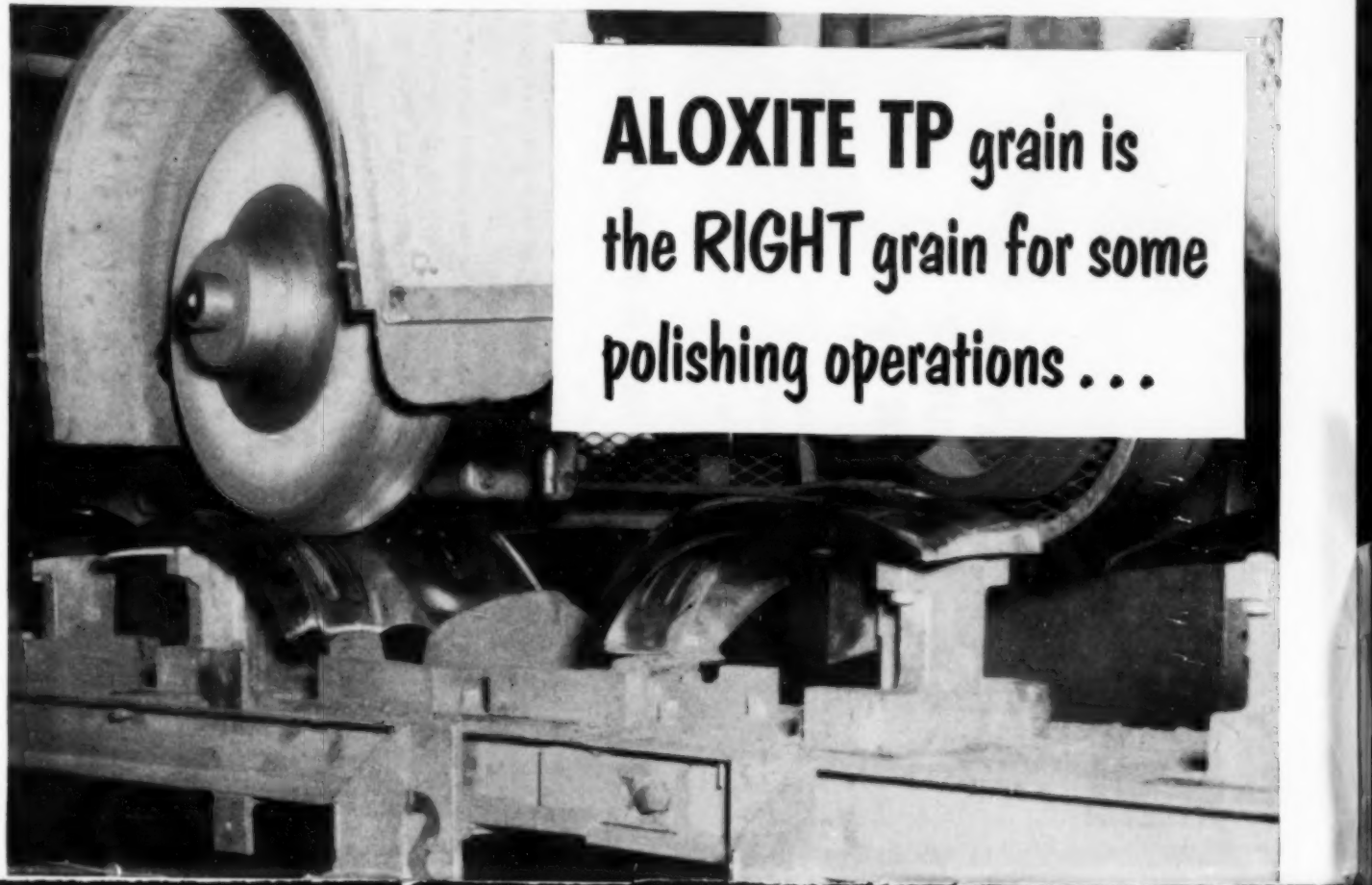
In use by industrial leaders in every field, the Sprayon Self-Spraying Touch Up Tool ends your touch up problems. Protect the eye-appeal of your product—get an extra bonus of customer satisfaction—and do it with big savings in time, cost and equipment investment! Sprayon goes right to your source for your own touch up finish, custom-loads the Tools for you under your own label. Exclusive Sprayon features mean even unskilled help do a factory-match job in minutes...for pennies. Use it anywhere—from your own production line to the final customer. Nothing else to buy—it's a disposable low-cost constant-pressure spray gun—a complete paint shop in a can!

WRITE TODAY FOR YOUR FREE "PUSH-BUTTON" FOLDER

SPRAYON PRODUCTS, INC.

2075 EAST 65 STREET
CLEVELAND 3, OHIO

SPRAYON *Self Spraying* TOUCH UP TOOL


ALOXITE TP grain is
the RIGHT grain for some
polishing operations . . .

. . . and the right one for EVERY operation is among the other six in the complete line by CARBORUNDUM

ALOXITE TP grain is just one of the outstanding grain types in the most complete line available to industry. It's a tough, blocky aluminum oxide grain—ideal for polishing operations involving heavy stock removal on steel and other high-tensile-strength metals. If that's your problem, ALOXITE TP grain is *right* for you!

GRAIN TYPE	CHARACTERISTICS	PRIMARY USES
ALOXITE TPT Aluminum Oxide	Tough, sharp. Grits 16 through 100.	Polishing operations involving removal of large amounts of metal.
ALOXITE TPL Aluminum Oxide	Very sharp, friable. Grits 16 through 220.	Polishing low tensile strength metals—copper, brass, bronze, aluminum.
ALOXITE TPC Aluminum Oxide	Medium sharp. Grits 16 through 220.	General purpose polishing grain—for removal of small amounts of metal.
ALOXITE TPW Aluminum Oxide	Powder. Grits 240 through 1000.	As the abrasive in paste heading of polishing wheels and belts.
CARBORUNDUM RA Silicon Carbide	Sharp, very friable. Grits 10 through 240.	Polishing cast iron.
CARBORUNDUM RA Silicon Carbide	Powder. Grits 280 through 600.	General purpose polishing.

FOR FREE BOOKLET, "Abrasive Grain and Powders," write Dept. IF 83-52R.

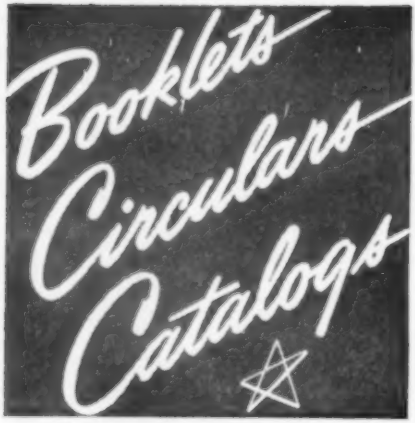
CARBORUNDUM

TRADE MARK

. . . the ONLY source for EVERY abrasive product you need

"Carborundum" and "Aloxite" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, New York.

83-52R



Paint Mixer Bulletin

A 6-page bulletin No. 521 is offered free by Conn & Co., 11 S. Marion St., Warren, Penna. This bulletin describes all types of mixers, stirrers and agitators for paints and other liquids. Both air and electric motor driven equipment are now included.

Booklet on Airless Spraying

A clear practical explanation of the Bede Airless Spray Painting System, with pictures of the equipment, appears in a small booklet which can be obtained free of charge from Bede Industrial Products, Inc., 1110 Brookpark Road, Cleveland 9, Ohio.

Flexible Shaft Machines

Bulletin No. 51 shows the complete line of flexible shaft machines for finishing operations, such as grinding, sanding, wire brushing, buffing, polishing and filing. Hard-to-reach corners and the insides of tubes and castings can be easily finished. The bulletin will be mailed upon request by Stow Mfg. Co., 73 Shear St., Binghamton, N. Y.

Compressed Air Conditioner

Instrument-quality air for all compressed air applications is now available from ordinary plant air.

Described in an illustrated bulletin covering construction features, such as the disposable filter cartridge, technical data and dimensions of the Hankison Model H-30-D Condensifilter. It includes a dehydrator, mechanical filter and automatic trap combined in a single unit. Write Hankison Corp., 951 Banksville Rd., Pittsburgh 16, Penna.

Pickling Bath Inhibitor

A 4-page folder on "Rodine" has been published. This organic compound may be added in small amounts to acid pickling baths to prevent needless attack on metal. This inhibitor is said to save both acid and metal, improve the pickling operation and the product. For a copy, write American Chemical Paint Co., Ambler, Pa.

Research Bulletin

A bulletin entitled "Ideas Into Dollars" has been published by The Commonwealth Engineering Co. of Ohio, 1771 Springfield St., Dayton 3, Ohio.

This illustrated bulletin sets forth the policies and methods used by this research group in the testing of materials and the development of ideas into new processes and new products. A copy will be sent free upon request.

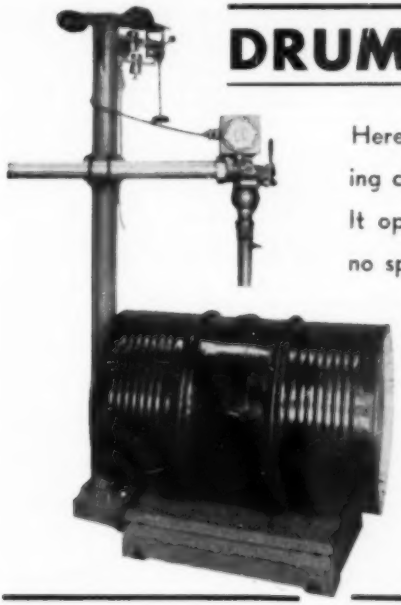
Torrington Brush Catalog

An illustrated catalog of 20 pages 8½ x 11-in., bound between heavy paper covers, and with alphabetical index, has been published by The Torrington Brush Works, Torrington, Conn. It lists over 400 brushes of all sizes and types, such as floor, bench, paint, varnish, wheel, oil, chip and many others. Copies of the catalog will be sent free on request.

Lilly Varnish Co.'s Facilities Shown in New Book—Free

A colorful picture book of 44 pages, 6x9-in. in size, shows the plant buildings, the laboratories, production and shipping facilities and many of the personnel of the Lilly Varnish Co. at Indianapolis, Indiana and Gardner, Mass., and The Lilly Co. at High Point, N. C.

The illustrations are so effectively interestingly presented that you seem to be actually visiting each of the plants and seeing the highlights of what goes on where modern finishing materials are developed, checked, tested, manufactured and prepared for shipment to customers. None of the personnel looks up or stares at you; no one is posing make believe; everyone looks so natural in his usual or routine activity that you feel at ease but curious. And the equipment and operations you see are of real interest and informative value.



DRUM FILLING UNIT

Here is an electrically controlled unit for filling containers from five gallons and upwards. It operates from a light socket and requires no special tools or technique for installing.

The valve will fill any liquid that will flow through a pipe line regardless of temperature or corrosive nature. Its accuracy is not affected by air, vapors, sediment or scale in the pipe lines. It has no complicated mechanism to adjust or to get out of order. Few parts and no springs insure long life, freedom from maintenance expenses and uninterrupted service. Further details on request!

THE VOL-U-METER CO.
P. O. BOX 54 BUFFALO 16, N. Y.

Included is a brief history of the Lilly Varnish Co., starting in Indianapolis in the year 1865; and pictures of the building and management group at each of the three plants.

An especially interesting highlight of the book is the section that shows views in the Metal Lithography testing laboratory and pictures of a variety of collapsible metal tubes, thin metal containers, and formed caps for bottles and jars—all colorfully printed and clear coated with Lilly material before cutting and forming the flat sheets of metal.

Jensen Pan-L-Heat Bulletin 16 Illustrated Pages

Jensen Specialties, Inc., 9331 Freeland Ave., Detroit 28, Mich., announces the publication of a 16-page, illustrated Pan-L-Heat brochure. Pages are 8½ x 11-in. and printed in two colors.

It contains technical information on how to choose the best temperature cycle and method of heat application, how electric radiant heat works, what catalytic heat recuperation from exhaust gases can mean to you, the accurate detedmination of heating requirements, recommended ste'.s in selecting yo.r next oven, and answers to many of your oven problems.

The brochure will be mailed free upon request.

Organic Chemical Catalog

A 92-page catalog 8½ x 11-in. with plastic binding is ready for distribution by Shell Chemical Corp.

The illustrated brochure reveals facts about the properties, specifications and applications of the company's solvents, industrial chemicals, resins and plastics. A section describees the facilities of its technical service laboratory in Union, N. J. The catalog also describes the company's national distribution system.

Copies of the catalog may be had by writing any of the Shell Chemical sales offices; for addresses see the company's ad in this magazine.

Air Conditioning Manual

A newly revised edition of the Trane Air Conditioning Manual, of 380 pages, is announced by The Trane Co., LaCrosse, Wisc.

A new fan chapter has been added to the book to cover fan application and selection, basic fan laws and duct design data and nomenclature. This chapter adds to the manual complete information on design of air handling systems for air conditioning. The manual can be purchased from The Trane Co., LaCrosse, Wisc. Price is $5.00.

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can rely on
RANDOLPH

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PERFORMANCE PROVED
GOVERNMENT SPECIFICATION
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Clear Metal Finishes • Colored Lacquers
Clear S.G. for Metal • Texture Enamels
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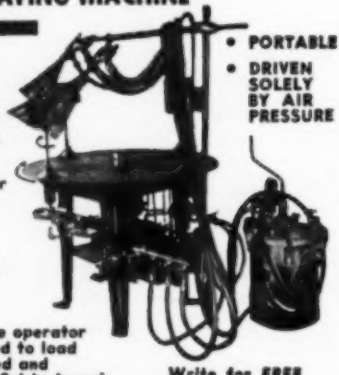
PRODUCTS CO.
CARLSTADT, NEW JERSEY

HOLLAND
automatic-pneumatic.
SPRAYING MACHINE



• PORTABLE
• DRIVEN SOLELY BY AIR PRESSURE

Production up to 1000 pieces per hour

Uses regular exhaust booth

Only one operator is needed to load unfinished and remove finished work.

Write for FREE folder "S"

J. HOLLAND & SONS, INC.
MANUFACTURERS · DEALERS
276 SOUTH NINTH ST · BROOKLYN N Y

Revolving Arm Applicators For Paint and . . .

Installation pictures and information that reveal what you want to know about the new revolving arm principle for paint applicators and metal parts washers, are included in a new 2-color bulletin of 8 pages, 8½x11-in., offered free by a manufacturer of complete finishing systems. The Spra-Con Co., 3600 Elston Ave., Chicago 18, Ill.

Chain & Sprocket Bulletin

A new bulletin on roller chains and sprockets is now available. This 54-page book describes the inherent advantages of roller chains, and illustrates all of the popular sizes. One section is devoted to a treatise on how to select standard roller chain drives with formulas, tables and examples showing this procedure.

Ask for Bulletin No. 52-1 from Baldwin-Duckworth, Division of Chain Belt Co., Dept. P. R., Springfield 2, Mass.

Metal Pretreatment Helps Paint Adhesion

A new 6-page folder by Specialty Coatings, Inc., Division of Thompson & Co., Oakmont, Pennsylvania, describes Vinsynite pretreatment for all types of metals. It includes details of the manner in which Vinsynite is used in finishing six different types of metal products for good paint adhesion and corrosion resistance. Test data show that Vinsynite is unaffected by severe distortion and exposure to standard A.S.T.M. salt spray test. The folder will be sent free upon request.

Electric Heat Magazine Free

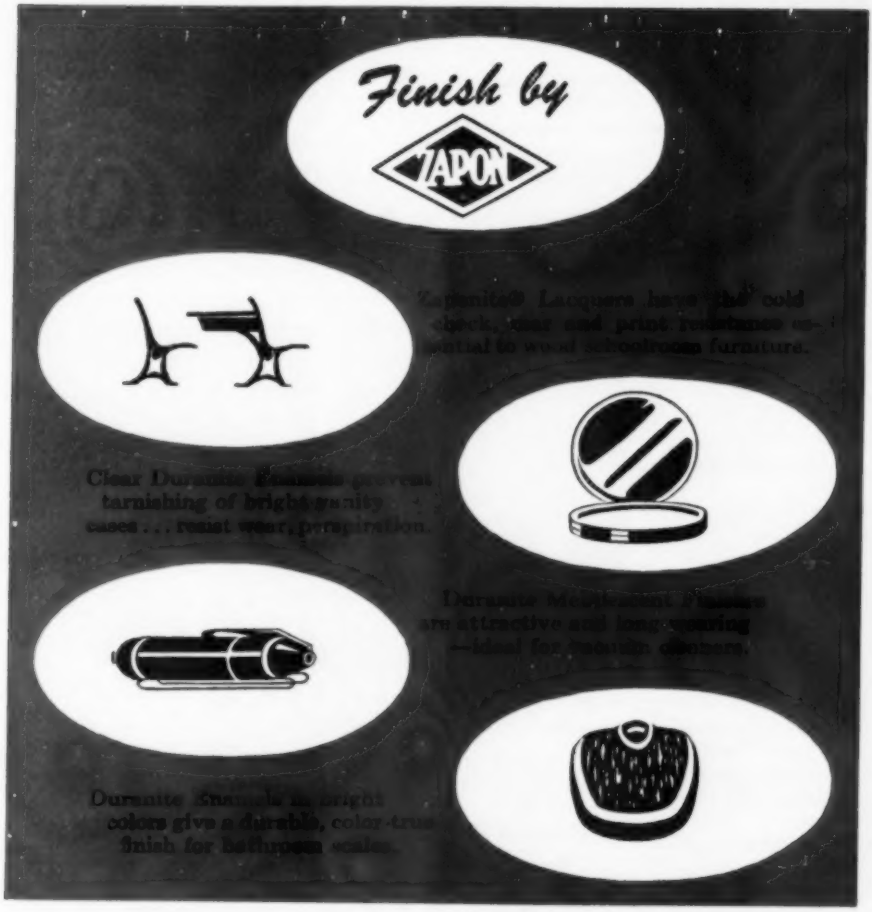
A bi-monthly publication of technical data and tips on process heating is now being published by Jensen Specialities, Inc., Detroit oven manufacturer.

"Heat Lines by Jensen," says F. Jensen, company president, "is designed to help men engaged in production planning and maintenance—where process heating is a factor."

Typical installations at major U. S. manufacturing plants are featured in each issue. Special heating problems of these manufacturers—and how they were solved—are described and illustrated. Other factual reports and features—with pictures—round out the 4-page publication.

Jensen Specialties, Inc., designs and manufactures electric Pan-L-Heat ovens, infra-red ovens, and conveyors.

To receive the free publication regularly, or for further information on Jensen products, write to: Jensen Specialties, Inc., 9331 Freeland Avenue, Detroit 28, Michigan.



"SERVICE FROM EVERY ANGLE"

A custom-tailored ZAPON finish really fits your product . . . because ZAPON "Service From Every Angle" recommends the best finish for the job—then works right on your production line to help set up the most effective finishing techniques.

ATLAS POWDER COMPANY WILMINGTON 99, DELAWARE

for Industrial Finishes • Stamford, Conn. • North Chicago, Ill.

Phosphate Coating Before Painting

THE PLACE OF phosphate coating in industrial finishing is now well established. Prospective buyers of painted metal products expect, and demand, that the articles they buy be finished attractively and that the finish will be durable—resistant to average service for many years.

Responding to this consumer demand, manufacturers of many metal products are including with their surface cleaning setup, some form of a phosphate coating.

By serving as a surface "anchor", a phosphate coating gives the paint put on over it greater resistance to chipping and will localize corrosion, should the paint ever be scratched or cut through to the metal.

Quick as consumers are to seek something better, they want it at a price that will not put the product out of their financial reach. Thus, a prime consideration from the producer's point of view, is the cost of the phosphate coating he applies to his products.

This, of course, takes quality for granted. No matter how economical it is in the raw material stage, a coating that does not provide lasting adhesion and corrosion resistance will prove to be expensive over the long haul. In addition to quality and cost, other factors in the selection of a phosphate process are volume of work to be turned out, the equipment investment the job justifies and degree of surface protection required.

SPRAY BOOTH SHIELD

SPRAY on clean booth. That's all! Perfect protection against drift.

PEEL OFF sheets —not shreds! No more tedious scraping! Job's done!

SAVE TIME & MONEY

Insist on using this "tailor made" peelable coating. Spray Booth Shield is plastic-based, tough and free stripping.

ORDER YOUR TRIAL GALLON TODAY... billed at Drum price.

Prompt F.O.B. shipments.

CHECK THESE ADVANTAGES

Ready to use • Atomizes at normal pressures • Requires no special reducer or equipment • Excellent coverage • Saves time and labor • Economical.

One leading manufacturer cut clean up time from 18 to one man hours! This is a typical experience with Spray Booth Shield.

RAMSELL MFG. CO.

1920 Madison Street - - - Maywood, Illinois

420 Market Street - San Francisco, California

Affiliated with Pyroxylin Products, Inc., Chicago, Ill.

From the preceding it is obvious that the supplier should have a complete line of phosphate materials from which users can choose to meet their requirements.—*Oakite News.*

C. F. Mayer, Industrial Oven Authority, Receives Award

Carl F. Mayer, a leading figure in the industrial oven field and president of The Carl Mayer Corp., Cleveland, Ohio, is one of four engineer-executives to receive the annual Trinks Award for outstanding achievement in the industrial heating industry. The presentation was made Tuesday, May 5, at a banquet in the Duquesne Club Cleveland, Ohio, sponsored by the Award Committee.

The Award is bestowed by a judges' panel, among candidates nominated by the industry, for the most notable contributions to economic or scientific progress in industrial heating. It was established in honor of Dr. Willibald Trinks, professor emeritus of Carnegie Tech and world authority on industrial heating problems.

Mr. Mayer was selected by the Award Committee for his design and engineering advancements in the industrial oven field. He is well known in the industry for his early development of steel insulated panel type ovens particularly in core and mold oven practice.

Mr. Mayer was also cited for his pioneering development in industrial ovens, air heaters, furnaces and allied equipment for which he holds some 17 patents. The more than 30 technical papers and articles he has published on industry problems have won him recognition as an international authority on industrial ovens.

A native of Cleveland, Ohio, Mr. Mayer was educated there and at the University of Michigan where he received the B.S. degree in Engineering (Class of '18).

Besides managing his own corporation Mr. Mayer is a member of the Board of Directors of The Swartwout Co., of Cleveland, and the Advisory Board, Smaller Business of America, which he served as president during the war. He also served on the Industrial Advisory Board—War Production Board, and was a Board member of the Industrial Furnace Mfrs. Ass'n. He is also a member of the Ohio Chamber of Commerce, the Wire Association, and National Association of Manufacturers.

THINNERS

LOW COST!

- ASK FOR QUOTATIONS!
- FORMULATED TO MEET ANY SPECIFICATION.
- QUALITY AND UNIFORMITY GUARANTEED.

Shipped in Tank Cars, Tank Wagons, Drums or 5 Gal. Cans.

Specialists in Thinners for the Leather Trade.

Low Cost Volume Blending and Drumming Service on Contract.

Write or Phone for Prompt service and deliveries.

ELL-BEE CHEMICAL CO., Inc.
HANOVER, N. J.
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BEACH STA-DRI
Moisture & Oil
SEPARATORS

Jumbo Model BB

Filters out moisture, oil, rust, dirt, scale and scum from your air lines.

Made in four sizes, cleaning from 500,000 to 4,000,000 cu. ft. before saturation requiring installation of new filter elements. Capacities from 30 c.f.m. to 300 c.f.m., in sizes from 2½"x8" to 4"x30".

Prices range from $20.50 for the smallest size to $137.50 F.O.B. Boonton, N. J., for the Jumbo Model BB shown in illustration.

Hundreds of STA-DRI Moisture and Oil Separators have been in successful operation for many years.

Write for descriptive literature.

Beach Precision Parts Co.
118 MECHANIC STREET
BOONTON, N. J.

Industrial FINISHING Editorial

Let 'Em Know What They Are Making, and Why

Employees who think about their job and your product make good workers. The story is told of a girl who had been employed in an appliance plant for some 17 months. She came to the foreman one day holding a part in her hand and asked, "Say Joe, where is this part used on the appliance? I have one in my home, and I've looked everywhere on it, but can't find anything like this."

Well the answer was simple. The company had a defense contract, and the part the girl referred to was not used on any appliance, but on a piece of military equipment.

The foreman told the story at the next foremens' meeting, and suggested a series of short product classes to acquaint the workers with the various parts of the product, their function and the whys and wherefores of the parts. Management thought well of the idea and 15-minute sessions were arranged at which the plant engineer explained the function of each part and showed the class where it fitted into the appliance.

It was like a sales talk to shop employees. They knew what they were working on and why they were doing each operation.

The company utilized a space along the plant cafeteria wall to install lighted show windows to display all models of appliances. These models are kept clean and up to date. As models are changed, the obsolete ones are replaced in the windows with new models.

Keeping employees enlightened and informed pays off in this plant, and in every other plant following this policy. Two facts are absolutely certain: 1) The attitude and policy of management is reflected in the employees. 2) Management's biggest and certainly its most important investment is in its employees.

Oh, Don't Say That! It's Hush, Hush

Wiping a surface with a tack rag just before finish coatings are applied is a very desirable and quite well-known practice wherever fine finishing is done. Tack rag wiping removes every trace of dust, dirt or lint that may have alighted on the cleaned surface during whatever interval of time has elapsed before the coating could be applied. Tack rags have been advertised and the technique of using them has been repeatedly mentioned in this publication for many years.

Yet sometimes, when the manuscript of an article about some firm's finishing or product painting operations is submitted, for approval, to the management of that company, all mention of tack rag wiping, if included, is deleted. Telling secrets.

In like manner other details that readers would appreciate "seeing" for comparison and checking are sometimes blue penciled—for example, the use of a mist coat in some metal finishing production lines; the employment of certain well known cleaning and pre-treatment techniques on new

BRING YOUR FINISHING PROBLEMS
TO
NEW PERIOD
The phenominal growth of NEW PERIOD is the best evidence of their ability to manufacture production finishes that meet any and all requirements. Perhaps we can help solve your problems? Send for complete information.
• Fillers and Stains
• Lacquers—Clear and Semi-Gloss
• Sealers
• Lacquer Enamels—Flat and Gloss
• Synthetic Enamels
Write for 5 Gallon Working Sample at Drum Price
MANUFACTURERS OF FINE WOOD AND METAL PRODUCTION FINISHES
NEW PERIOD
Production Finishes
ESTABLISHED 1917
NEW YORK WOODFINISHERS' Supply Co. INC.
109 IMLAY STREET BROOKLYN, N. Y.

metal surfaces prior to painting to prevent rust and to increase paint adhesion; the use of a thin glue size or similar pre-treatment of wood in the white before final sanding and the beginning of finishing operations; "room-conditioning" and agitation of drums of paint before using the contents; also, thinning, straining, and measuring the viscosity of paints to maintain cleanliness and uniformity of the material about to be used, etc.

A few concerns object to any mention of the facilities they have for repair or touch-up finishing, or stripping tanks for removing all finish or paint from rejects, yet everyone knows that few if any finishing setups for high grade products are so perfect that every piece finished and handled is 100% satisfactory without some final attention by a skilled patch-up, touch-up expert. Patching, repairing and touch-up finishing are widely recognized as being necessary in connection with the finish production line in practically all factories where high grade products are made, particularly fine furniture, pianos, TV and radio cabinets—and a number of metal products too.

Of course, it is understandable for a firm, whose operations are being written up in an article, to perhaps prefer to withhold certain details of some special methods or devices developed exclusively for this company after much experimenting and expense, but to delete all mention of equipment, tools, methods and techniques that are well known to readers of this magazine—that is an act which seems unkind, unnecessary and unfair to everyone concerned. Let's not carry selfishness too far. If you are observant and alert, you can learn much more from others than they will ever learn from you.

Technical Directors' Meeting S. R. & Co. Paint Factories

A Technical Directors' Meeting of Sears, Roebuck and Co.'s paint and varnish factories was held at the Carolina Paint & Varnish Works on April 14 and 15. Mr. G. A. Nichols, Technical Director, and Mr. F. O. Vogenitz, Chief Chemist of the Central Laboratory in Chicago, conducted the technical meetings on industrial and trade sales finishes. The meeting was held at the Carolina plant as part of the company's overall program of having its key personnel visit each of its manufacturing facilities. Future meetings will be held at the company's plants in Berkeley, California; Chicago, Illinois; Dallas, Texas; and Philadelphia, Pennsylvania.

Mr. R. G. Brooks, Plant Manager, and Mr. R. A. Prokop, Technical Director of the Carolina Paint & Varnish Works, were hosts for the meeting. Members of the parent staff in attendance were: Mr. A. B. Robertson, retiring General Manger of the Paint and Varnish Factories; Mr. S. U. Greenburg, the newly appointed General Manager; and Mr. W. G. Beauchamp, National Sales Manager.

The following technical personnel were also in attendance:

L. A. Chloupek and R. R. Jedlicka of Benjamin Franklin Paint & Varnish Co.
J. H. Kissel of Carolina Paint & Varnish Works.
F. W. Minner of DeSoto Paint & Varnish Company.
W. C. Nicoll of Illinois Paint Works.
W. F. Rhoades of Pacific Paint & Varnish Company.
E. R. Schwab of John A. Steen Varnish Company.
J. R. Dove of Central Laboratory.

Finishing by Vacuum Metallurgy

National Research Corp., 70 Memorial Drive, Cambridge, Mass., offers reprints of a recent article, "Economical Finishing with Vacuum Metallurgy", describing the use of the vacuum metallizing process in manufacturing both plastic and metal parts. This article discusses all factors which must be considered in determining the applications of this process to specific finishing or coating problems.

Ames Speaks at International A. E. S. Meeting

B. F. Ames, general sales manager of Maas & Waldstein Co., Newark, N. J., Chicago and Los Angeles, addressed a joint meeting of the Buffalo, New York, Toronto, Ontario, Canada branches of the American Electroplaters Society.

The topic of his address was, "New Developments in the field of Organic Coatings", during which time he included the complete variety of materials that are currently being manufactured in the United States.

Also discussed were the advantages and disadvantages, as well as applications and use of a variety of synthetic coatings, such as alkyd, melamine, phenolic and the various modifications made therefrom, including styrenated coatings and the new Epon resins. Chlorinated rubber finishes and vinyls were discussed at length.

Mr. Ames concluded by discussing his company's new multicolored enamel, Plextone and reviewed the many possibilities of application and end use for this material.

Men who attended electroplater's meeting which Mr. Ames (seated sec. from l.) addressed.

Random Comment on the Industrial Scene

(Continued from page 8)

who expect a golden age of prosperity and leisure—both are wrong. Industry will advance in mechanical and automatic production with system engineering leading the way—but men will always be in demand.

* * *

No Fogged or Steamed Glasses. A new anti-fog and lens cleaning cloth has been developed, for use on glass or plastic surfaces, to prevent the formation of fog or steam on eye-glasses, windshields, windows, mirrors, etc., caused by body heat, humidity or temperature changes.

By simply wiping the surface to be treated with the impregnated No-Mist cloth, the object is both cleaned and fog-proofed in one quick, easy operation; no need of liquids, tissues or cabinets.

Packed in handy individual plastic bags, No-Mist cloth can be carried in the pocket and is instantly available.

* * *

Cleans Motors Safely. A new solvent that cleans electric motors and generators while they are still assembled is announced by The Shaler Co., Waupun, Wisc. According to the company, motors and generators can be cleaned two different ways with this solution.

1) A motor can be submerged in the cleaning solution, then plugged into electric current and allowed to run from three to five minutes. The motor is then removed from the dip tank and dried with compressed air.

2) The cleaning solution may be sprayed into the intake side of a motor while it is in operation.

Motors that have been accidentally submerged in water as a result of fire or flood, may be cleaned without "baking". This cleaner does not affect wiring or insulation that is resistant to oil or gasoline.

Ransburg No. 2 Process Shown By Color-Sound Film

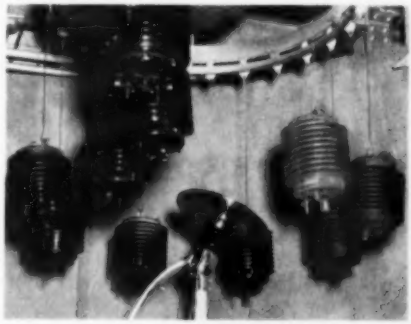
A new 25-minute, 16-mm., color-sound, film explains the Ransburg No. 2 Process of electrostatic painting and shows many production line applications.

Available upon request to the Ransburg Electro-Coating Corp., Barth & Sanders Aves., Indianapolis 7, Indiana, this movie is recommended to those interested in production line painting operations . . . . the new electrostatic atomizer is explained.

This is an all-electric, airless system (no compressed air is used), the paint being atomized by electrostatic force. Merits of the process are revealed by actual case-history style of presentation, with over half of the shooting being done on customers' production lines. The efficiency of this automatic system is such that a booth is not needed for paint overspray.

In case history fashion, the film shows how finishing costs, including materials and labor, are decreased while production is increased, and a higher quality of work is produced . . . .

A wide variety of applications is included in the plant visits to illustrate versatility of the No. 2 Process. For example, the painting of roofing and siding for steel buildings at the rate of 15,000-sq. ft. per hour is seen at the Galesburg plant of Butler Mfg. Co. Curtain rods, washing machines, metal chairs, auto seat frames and tail pipes, ironing boards, door knobs—all of these articles, and



The new Ransburg disc atomizer is shown here in one of the 16 Ransburg testing laboratories in Indianapolis. Included in the laboratory shots are the workholder designs.

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TOLEDO, OHIO

A liquid water treatment for Spray Paint Booths

- *Unites Readily with Water*
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- *No Pre-mix*

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many more, are included in the pictures of factory production lines.

Ransburg's laboratory test facilities are also shown—16 conveyorized units where new applications are proved for production line installation. Here, all details are carefully developed by experienced engineers under conditions that simulate the prospect's production requirements. Various test units are shown in action on various articles.

Safety Service Guide

The National Safety Council's new Occupational Safety Service Guide provides company safety directors with a catalog of many accident prevention aids available from the Council.

The 52-page guide offers the Council's periodicals, newsletters, and a complete library of technical and administrative publications covering all phases of occupational accident prevention.

Copies of Service Guide 2.1 can be obtained free by writing the National Safety Council, 425 N. Michigan Ave., Chicago 11, Illinois.

Circo Moves to New Plant

Topper Equipment Co., manufacturer of Circo vapor degreasing equipment, metal parts washers, dryers, solvent recovery stills, steam cleaners, Circo-Solv (trichlorethylene) and Per-Solv (perchlorethylene) recently moved into a new and modern 40,000-sq. ft. plant at Rahway, N. J.

New plant, Circo vapor degreasing equip.

The new plant is located adjacent to the New Jersey Turnpike and the Garden State Parkway on the Lehigh Valley Railroad.

T. J. Mulcahy, Jr. Chief Chemist For Plasti-Kote, Inc.

Plasti-Kote, Inc., of Cleveland, pioneer in aerosol packaging, announces the appointment of Thomas J. Mulcahy, Jr., as chief chemist in their industrial research laboratory. His immediate assignment will be the development of new products to be packaged in aerosol containers.

Mr. Mulcahy, 27, is a graduate of John Carroll University, and had post graduate work at Case Institute of Technology. He lives at 14506 Glencliffe Road, Cleveland, Ohio.

Find Out What Goes on; Plant Inspection Helps

★ It is a good idea to systematically check over what goes on in each department at regular intervals. Factory conditions change from time to time just as conditions change outside the plant. We are all creatures of habit, both good and bad. Those who work in a department every day are often so close to their work and conditions that they do not realize what changes are taking place.

An example will illustrate what I mean. This occurred in a plant where the paint is applied electrostatically. The electrostatic booth is located about 15-ft. from an outside wall containing large factory type windows. Scattered along this wall are several sub-assembly benches.

An operator at a bench opposite the electrostatic booth got into the habit of opening the window when he became a little too warm for comfort. The open window caused a cross current of air to pass perpendicularly across the face of the booth and blow through the booth at an angle. The velocity of the air was dependent upon the direction and velocity of the wind. Of course the operator didn't keep the window open all of the time, but it was open enough to cause unnecessary coating of the grid wires on the far side of the booth, a consequent loss of paint, and starved film on parts passing through the field when particularly strong air currents were present.

On his periodical tour of department study the assistant works manager discovered the cause of the trouble. The subject was discussed at the next foremens' meeting. The problem was solved by moving the sub-assembly bench to the opposite end of the room where the operator could open the window without causing any damage to paint operations.

Discussing the various subjects at foremens' meetings, instead of taking up the individual problems with department heads, often proves to be advantageous in that all foremen become better acquainted and informed on overall plant operation.—*B. C.*

★ *Guest Editorial . . . Many readers can write an excellent editorial—two or three paragraphs that present a timely suggestion or valuable idea which will stimulate thought on a live subject. The Editor welcomes guest editorials and pays for those used.*

He Can Make or Save A Lot of Trouble

★ In every plant that uses industrial finishes there is one man who has more to do with the smooth operation of the paint department than either the foreman or the superintendent. This man, who for want of a better title is known as the paint mixer, can make or break the department as far as operating costs are concerned.

Where the paint mixer is competent, likes his job, and is given time to do it properly, the finish will be uniform, with comparatively few rejects. Where the paint mixer is incompetent, or rushed, or where there is no one person responsible for the preparation and uniformity of the paint, trouble is brewing every minute of the day. And it shows up in work stoppages, variations in the finish, wastage of paint and solvent, and in the general confusion that attends the start of every operation.

The best paint mixers are above all careful and conscientious. They believe that the plant will fall apart if anything goes wrong with their paint. Consequently they are always on the lookout for trouble. Often they are able to catch it before it occurs, or before it becomes serious.

Because of the very nature of their

accomplishments, good paint mixers too often do not receive the credit that is due them. Only a plant that has had and lost such a man can really appreciate how important he is. Superintendents who are harrassed by inefficiency in the paint department would do well to look into this phase of their operations.—*L.A.H.*

Mark Lindsay Appointed by Sullivan Varnish Co.

The Sullivan Varnish Co., Chicago, Ill., announces the appointment of Mr. Mark Lindsay, as a representative in Indiana, Michigan and special accounts in Chicago. Mr. Lindsay's background of 25 years in the field of Industrial Finishes makes him particularly well qualified for the position. This appointment is in line with company's program in augmenting its sales force with highly trained technical men.

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• Lower Operating Cost
WRITE FOR FREE TRIAL SAMPLE
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Vacuum Pump Catalog

A catalog of rotary positive air and vacuum pumps is now ready for distribution.

The catalog details construction and operational features of Leiman 4-wing and 2-wing pumps, designed for applications requiring up to 29.9-in. vacuum and 25-psi. Tables of vacuum, pressure and specifications are given for each type of pump. Also covered are air motors and accessories.

Those interested should ask for Catalog No. 752, Lieman Bros., Inc., 100 Christie St., Newark 5, N. J.

C. E. Fitzgerald, Sales Mgr. for Burdett Mfg. Co.

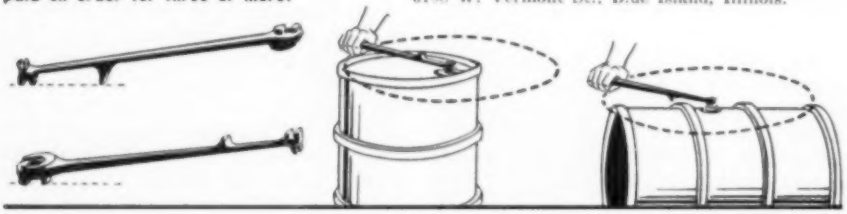
Mr. C. E. Fitzgerald, until recently Sales Engineer in the State of Michigan and Ohio for the Burdett Mfg. Co. of Chicago, has been appointed Sales Manager. He joined the Burdett organization in 1945 and served as production and development engineer until 1948.

Mr. Fitzgerald's immediate plans provide for greatly extended representation and service facilities of the company's line of complete finishing systems, "Radiant Heat" combustion system, baking and drying ovens, heaters, air make-up units, spray booths, washers, etc. His office is located at 3433 W. Madison St., Chicago 24, Illinois.

5-in-1 Steel Drum Wrench

Price $6.00 F.O.B. Chicago. Postage paid on order for three or more.

It fits all sizes and designs of caps or plugs which close the openings in steel drums. Positive grip without slipping. Guaranteed not to break. William C. Richards Co., P. O. Box 155, 3108 W. Vermont St., Blue Island, Illinois.



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RONA LABORATORIES, INC., 358 Doremus Ave., Newark, N. J.

K. B. Kemp for Ransburg Corp. In New York Area

Mr. Korby B. Kemp has been appointed sales representative for the Ransburg Electro-Coating Corp. in the Northeastern Area, covering New England, Metropolitan New York and Northern New Jersey.

A new member of the Ransburg Electro-Coating Corp. sales organization Mr. Kemp has been associated with the production finishes industry in this area for the past seven years. He is a veteran of World War II service in the Navy Air Corps.

Mr. Kemp will use his home in Quincy, Mass., for temporary headquarters.

Detrex Corp.'s New Process Makes Two Chemicals

The Detrex Corp., of Detroit, Mich., has announced a new and highly efficient process which results in simultaneous production of both an important industrial solvent and a basic raw material used in the manufacture of a wide variety of chemicals and plastics.

The new process was developed for the manufacture of trichlorethylene, a metal cleaning solvent. It also produces hydrogen chloride. Detrex originally developed the stabilizing process which made trichlorethylene commercially practical.

The new process will be installed in the Ashtabula plant, and conversion is expected to be completed by April 1954, with no interruption in the production of trichlorethylene at the time of the changeover.

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Waterproofing Bulletin

Troubled by leaky masonry walls and moisture penetration? A 6-page bulletin compares results given after testing various silicone water repellents. These tests, performed by York Laboratories of Stamford, Conn., describe in detail the test procedures and impartial conclusions. Sponsored by L. Sonneborn Sons, Inc., makers of Hydrocide SX, a silicone water repellent, the tests reveal the difference between certain silicones.

Copy of the bulletin is free; write Dept. P-6 Building Products Division, L. Sonneborn Sons, Inc., 404 Fourth Ave., New York 16, New York.

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• REPROCESSED in our plant to conform to its original specification, in both physical and chemical properties, paint waste overspray or sludge can be used again in regular production at considerable savings. Our more than 13 years' experience is customers' guarantee of satisfaction.

• WRITE for complete details!

W. C. RICHARDS COMPANY 3108 W. Vermont St., Blue Island, Ill.

Finishing Systems Catalog

A new 16-page catalog about finishing systems is now available. It illustrates and describes a wide variety of finishing systems and equipment.

Both self contained and unitized systems are covered. Examples shown cover small and large parts, auto hardware, ordnance and similar finish applications.

A copy will be sent those requesting it on a firm letterhead to Cincinnati Cleaning & Finishing Machinery Co., Schmidt Bldg., Cincinnati, Ohio.

CLASSIFIED ADVERTISING

The rate on ads appearing in this department is $1.00 per line of 6-pt. light face type, per insertion. Minimum charge, $5.00. Ads set in 8-pt. extra bold face type cost $2.00 per line, per insertion.

LACQUER CHEMIST AVAILABLE.

Twelve years' industrial experience, with 8½ years as lacquer chemist and in charge of laboratory. Formulate quality materials; TV and conveyor line finishes experience. Good technical and field service background. References. Address IF-125, care Industrial Finishing.

EXPERIENCED FINISHES FORMULATOR AND PLANT MGR.

If you need a man with "know how" and managerial ability to run your plant and formulate your products, with 15 years' experience in industrial finishes, for an interest in your organization, address IF-118, care Industrial Finishing.

POSITION WANTED

As furniture finishing superintendent. 25 years' experience conveyorized and progressive systems, producing all types of high-grade bedroom and dining room furniture and TV cabinets. Ability to train help, handle any number of men or women. Develop new and maintain color line. Can produce quality work at low cost. Thorough knowledge of material. Qualified to take full charge of finishing department. Can give best of references. Address IF-119, care Industrial Finishing.

CHEMISTS WANTED.

The services of two chemists are required by new organization producing dispersions and industrial coatings. Excellent opportunity for men experienced in this field. WESTFIELD CHEMICAL CORP., Westfield, Massachusetts.

AUTO UNDERCOAT FORMULATOR

With experience, who wants to join a proven growth organization offering personal opportunity, should contact Jones-Dabney Co. in Detroit. Salary open. Other attractive benefits. Excellent working conditions. We shall be delighted to answer any of your questions in strictest confidence. Write or telephone C. E. WURST, Jones-Dabney Co., Detroit, Mich., TOwnsend 8-2750.

SALESMAN WANTED.

$15,000 a year plus expenses to start for an Industrial Paint Salesman with a proved background and experience. Established Central West territory. Company will only consider man of highest calibre. Address IF-124, care Industrial Finishing.

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With experience who are seeking opportunity in an industrial laboratory of a proven growth organization can contact Jones-Dabney Company in strictest confidence. Salary open. Other attractive benefits. Spacious, modern, air-conditioned laboratory building now under construction to provide ideal working conditions. Located in Louisville, Ky. We shall be delighted to answer in confidence any question you have. Write C. M. JACKSON, Box 328, Louisville 1, Ky. Prefer not to write? Then telephone JA 8351, Louisville.

SALESMAN WANTED.

Technical service salesman familiar with all phases of metal finishing. Must be familiar with and have experience with flo-coating and electro-static spray equipment. Production experience essential as man must be able to recognize and correct problems on the job. Desire man capable of developing into salesman. There is no ceiling on earnings for our salesmen. Address IF-120, care Industrial Finishing.

SALESMEN WANTED.

Experienced salesmen selling lacquer and synthetic finishes. Good opportunity, open territory, good laboratory cooperation. Factory in Newark area. Apply in detail. Strictly confidential. Write IF-121, care Industrial Finishing.

WANTED TO BUY

Will buy your dirty Thinners and Solvents. Send samples or letters giving approximate contents and solids. Address THE JOHANN CO., 8547 S. Ashland Ave., Chicago, Ill.

FORD CUPS

THE VOL-U-METER COMPANY

Buffalo 16, N. Y.

EQUIPMENT SALESMEN WANTED.

Chicago manufacturer of complete Metal Finishing systems, ovens, heaters, air make-up units, spray booths and washers, wants qualified salesmen for states of Michigan, Ohio and Pennsylvania. Salary, commission and expenses. State sales and equipment experience, education, territory traveled, salary, etc. Address IF-122, care Industrial Finishing.

SOLVENT CLEANING SERVICE.

Dirty lacquer solvent can be shipped to us for distillation and returned to you clean and ready for use. Within 200 mile rad us of Louisville a substantial economy can be realized. Cost runs from 14c to 19c per gallon. KENTUCKY COLOR & CHEMICAL CO., 600 N. 34th St., Louisville 12, Ky.

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Two-coat, one-bake, 5-stage spray Bonderite, dry-off oven, spray booth (water curtains), bake oven. Conveyor and drives. This equipment may be seen in operation. Detailed information may be obtained upon inquiry to AMANA REFRIGERATION, INC., Production Dept., Amana, Iowa.

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Paasche Automatic Airpainting and Drying Unit Complete with Water Wash Booth.
R. C. Mahon Spray Booths with Blower, Pump, Filter, Turntable, Etc.
Barratt Centrifugal Enameler for Filwhirl or Dipspin Methods.
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INDEX *to Advertisers*

Acorn Chemical Co. 126
Advance Paint Co. ..... Third Cover
Agate Lacquer Mfg. Co. 109
Allied Finishing Specialties Co. 107
Aluminum Co. of America 34-35
Atlas Powder Co. 119

Baron Industries 129
Barrett Varnish Co. 59
Beach Precision Parts Co. 121
Better Finishes & Coatings, Inc. 77
Boad Chemical Products Co. 108
Burdett Mfg. Co. 11

Capitol Machine Co., The 16
Carborundum Co., The 114-115
Cellusuede Products, Inc. 80
Claremont Waste Mfg. Co. 75
Classified Advertising 130

Day & Co., James B. 73
DeBurgh Conveyors, Inc. 91
Despatch Oven Co. 17
Detro Mfg. & Sales Co., Inc. 101
Detroit Surfacing Machine Co. 100
DeVilbiss Co., The 82-83
Dolan & Co., V. J. 5
Dualheet, Inc. 7
DuBois Co., The 6
DuPont de Nemours & Co., E. I. 68-69
Duralac Chemical Corp. 8

Egyptian Lacquer Mfg. Co., The 27
Ell-Bee Chemical Co. 121

Ferbert-Schorndorfer Co., The 36
Fostoria Pressed Steel Corp. 18-19

Gasway Corp. 97
General Traders, Inc. 131
Glidden Co., The 14-15
Grand Rapids Varnish Corp. 2

Hammond Solvents Recovery Service 126
Harco Chemical Co. 128
Hercules Powder Co. 85
Holland & Sons, Inc., J. 118

Jamestown Finishing Products, Inc. 79
Jensen Specialties, Inc. 12

Kirk & Blum Mfg. Co. ..... Back Cover
Klem Chemicals, Inc. 41
Koch Sons, Inc., George 63

Lanly Co., The 45
Lawrence-McFadden Co. 105
Lilly Varnish Co. ..... Front Cover
Lowe Brothers Co. 102-103

M. & E. Mfg. Co. 1
Mearl Corporation, The 22-23

National Air Sander Co. 95
Neilson Chemical Co. 42
Newcomb-Detroit Co. 53
New York Woodfinishers Supply Co. 123
Nikolas & Co., G. J. 21

Oakite Products, Inc. 32

Perfection Paint & Color Co. 87

Qualatone Products, Inc. 99

Ramsell Mfg. Co. 120
Randolph Products Co. 118
Ransburg Electro-Coating Corp. 20
Rayon Processing Co. 74
Research Products Corp. 109
Reliance Varnish Co. 57
Richards Co., W. C. 128-130
Rinshed-Mason Co. 13
Rockford Varnish Co. 92-93
Rockwell Co., W. S. 43
Rona Laboratories, Inc. 129
Ross Engineering Corp., J. O. 29

Schaefer Varnish Co., Inc. 65
Schmieg Industries, Inc. 9
Scott's 81
Shell Chemical Corp. 31
Sherwin-Williams Co., The 54-55-67
Snyder Bros. Co. 61
Solvents & Chemicals Group, The 33
Solvents Recovery Service, Inc. 126
South Florida Test Service 129
Specialty Coatings, Inc. 52
SpeedWay Mfg. Co. 111
Sprayon Products, Inc. 113
Spruance Co., The Gilbert ..... Second Cover
Star Chemical Co., Inc. 101
Sundstrand Machine Tool Co. 47
Synthon, Inc. 81

Thompson & Co. 52
Tousey Varnish Co. 10

United Lacquer Mfg. Corp. 89

Varnish Products Co. 99
Vertipile, Inc. 71
Vol-U-Meter Co. 117-131

Young & Bertke Co. 39
Young Brothers Co. 51

industrial finishes to fit any surface, method, or requirement

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Indianapolis Indiana

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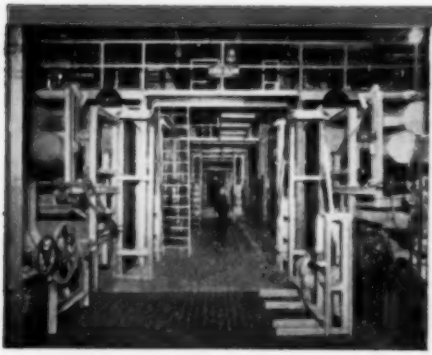
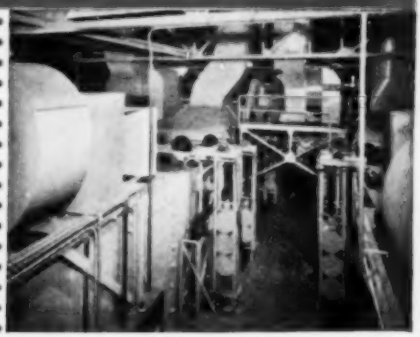


Rock Wool Batt Production; fibres are formed into batts, compressed to proper density and baked.



Air Heating and Handling Equipment; ovens are gas-heated, atmospheric air used for cooling.

KIRK AND BLUM

TWIN OVENS AND COOLING TUNNELS SPEED ROCK WOOL PRODUCTION

...at Philip Carey Mfg. Co., Cincinnati, Ohio

Recently installed at this noted insulation and building products manufacturer, twin KIRK & BLUM Ovens have increased rock wool production and assured continuous operation.

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Whatever your needs in ovens...for drying, baking or dehydrating . . . consult KIRK & BLUM. There's no obligation. Write for booklet, "Industrial Ovens," showing other typical installations.

Dual Rock Wool Processing Lines; Ovens in left background and cooling tunnels at right. In left foreground is rock wool granule reclamation, particles are collected and bagged.

FOR CLEAN AIR...THE INVISIBLE TOOL

KIRK AND BLUM

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The KIRK & BLUM Mfg. Co. 2121 Fenver St., Cincinnati 9, Ohio